

ORIGINAL ARTICLES

STUDY OF THE COINCIDENCE OF SYPHILITIC AND NON-SYPHILITIC AFFECTIONS OF THE SKIN

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There are certain vulgar prejudices relative to the physical condition of the subject of syphilis, whose influence is not without effect in the minds of many physicians. The difficulty, indeed, which even the most expert must at times encounter, in determining the exact nature of certain definitely evolved skin symptoms in such cases, needs no comment. It is a difficulty only too readily evaded by establishing a diagnosis of syphilis, and there abandoning all further aetiological question. The popular and pseudo-scientific reasoning upon this point, traverses the entire field of clinical medicine. It is sufficiently common to read that the reporter of this or that history, suspecting that there was "a syphilitic element in the case," did thus and so. The idea is prevalent that a mischievous, anomalous, capricious or remarkable change of symptoms, is due to the influence of single one operating coincidently with several disease factors, and that this species of pathological clock is syphilis. It has been urged that syphilis, though possessing sufficiently well accentuated features at some periods becomes at others so commingled with other diseases as to lose in part its characteristic physiognomy, especially after a suppurative descent to several generations. In this way, an explanation has been sought for the existence of struma, tuberculosis, rickets, leprosy, and many other disorders of the human system. Not a few diseases of the skin have been thus hastily and unsoundly regarded in an improper relation, as, for example, psoriasis, lupus vulgaris, and some of the forms of acne.

It is somewhat curious that the same species of reasoning has not pushed to an equal extreme in the case of other disorders of a greater or less gravity. Intestinal parasites, for example, when discovered in the person of patients affected with chronic disorders, are not generally attributed to the latter ailments. The subjects of pulmonary phthisis are also sometimes sufferers from other disorders not explained by a tuberculous development. The diarrhoea of the infant, and the sciatica of the man affected with catarrh, are not commonly referred to the same causes.

The more precise, exact, and painstaking the study of the symptoms in syphilis, the more clearly will be recognized two facts, which, though at first view involving an apparent variance, are yet strictly related. The first is, that syphilis much more resembles other diseases in its career and its subjection to accidental influences, than has been commonly supposed and taught; second, that when, preceding, co-existing with, or following other pathological conditions, its unity is preserved, and it rarely undergoes itself, or induces in other diseases such a modification as distinctly changes the type of the resulting symptoms.

The first of these facts is of rather less practical importance than the second, and is, moreover, one that requires for its acceptance a surrender of fewer popular opinions. It is therefore, in this connection, merely supported by the enunciation of the following propositions. The second fact will require clinical demonstration.

(a) Allowance being made for a wide field of distribution of its lesions and a certain capriciousness in the mode of their evolution a study of one hundred consecutive cases of syphilis will convince the unprejudiced observer that such cases resemble each other as closely as do a similar number of consecutive cases of pneumonia, typhoid fever, or chronic interstitial nephritis.

(b) Syphilis is no exception to the general rule, that the patient of greatest vigor best endures its penalties. Herein is the key to an enormous number of the problems, presented in its wide limits of manifestation. It is far more a question of weight, of nutrition, of muscular vigor, of the function of the chylipoietic viscera, than of mercury or other drugs to be employed in its treatment. It is far more important to enquire, in every case, what is the condition of the blood-making process, than what is the condition of the blood, as regards infection or non-infection. The French School of syphilographers, for example, have well nigh vainly perplexed themselves in the effort to diagnosticate the character of a threatened syphilis from the features presented by its initial sclerosis but in settling such a prognosis, it is of greater value to determine how many pounds of animal food the patient can properly assimilate in a given period of time, than to know how large is his neoplasm, or how deep his ulcer.

(c) Syphilis acknowledges subjection to the great accidents, which commonly and evidently work changes in all the disease-processes of man. Thus, chronic alcoholism, malaria, temperature change sufficiently severe to prolong or aggravate disease and

a long list of other agencies, operate with similar effect upon an equally long category of maladies. He who gets a pneumonia, after lying drunk in the gutter on a severe night in winter, has, after all, but a severe pneumonia. And, similarly, the syphilis of the old man, broken down with the debaucheries of a half century, we may, with the French describe as "galloping." But this is merely a rapid evolution of grave symptoms which in no other respect differ from those of common observation.

(d) Syphilis, like other diseases, may lurk obscurely in the system, but everything said and done, it must be betrayed by syphilitic symptoms, or we cannot admit its existence. Not every man who is losing flesh has become tuberculous. Every pallid wife with a dissolute husband, has not undergone infection. Kassowitz has well emphasized this point in his protest against the assumption that every abortion of even the syphilitic woman is not necessarily due to syphilis, nor the product of conception of necessity infected.

(e) Vulgar belief to the contrary, notwithstanding, cases of syphilis, like those of other diseases, are readily separable into three well-known groups—First, the mild, benignant or self-limiting, requiring no treatment. Second, the grave, malignant, where treatment can have little or no effect. Third, those falling between these two extremes, where judicious treatment is capable of turning the scale in one direction, and injudicious treatment in the other.

(f) Lastly, there is no specific treatment applicable to every case of syphilis, which can be safely employed to the exclusion of all others. This is almost an axiom in general medicine. He who treats rheumatism with remedies addressed solely to the supposed rheumatic diathesis, and he who treats pulmonary phthisis with medicaments solely directed to the lungs, will commit the blunder of him who relies exclusively upon so-called specific medication in the treatment of syphilis.

This much premised, it is proposed in what follows to inquire how far clinical evidence supports the second of the two propositions set forth above, that, viz., which recognizes the unity of syphilis displayed in fairly typical symptoms in the subjects who are affected with other diseases, more particularly those involving the skin.

The few diseases to which reference is made in this connection, are considered in the order of the classification adopted by this Association.

In the first group, which includes the disorders of secretion, the varieties of seborrhœa and comedo are probably found in more frequent co-existence with syphilis than the other disorders included in the same class. It is usually in these cases the disorders of the sebaceous glands which precede, and the syphilis which follows. In studying, however, the interdependence of the two diseases, the seborrhœic complications of several of the syphilodermata should have no significance. But the occurrence of syphilis in young and middle-aged subjects, affected both with seborrhœa sicca of the vertex of the scalp and comedones of the face, is by no means rare, either in dispensary or private practice. It is scarcely necessary

to remark that syphilis may in these cases accomplish its usual career without appreciably affecting these disorders, either in the one direction or the other. It does not appear that the manifestations of the latter disease in any way modify those of the others, nor is the seat of the one which precedes, the site by preference of that which follows.

The hyperæmic disorders of Class II occur frequently as intercurrent accidents in the subjects of syphilis. The fact that they do thus occur, and are then presented in typical and unmodified forms, is established by common experience. Erythema intertrigo of the scroto-femoral angle in syphilitic male subjects, often due to the inunction of mercurial and other irritating unguents in this region, accomplishes its transitory career for the many, and vanishes without the appearance of a syphiloderm. The same may be said of a number of the exudative disorders included in Class III. Last winter I exhibited at the skin and venereal clinic in Chicago a lad nineteen years of age, who had an extra-genital chancre of the thumb, and who displayed a typical lenticular papular syphiloderm on the forehead, trunk, and extremities. His belly, however, was covered with equally typical urticarial wheals, produced by causes to which reference will be made later. These urticarial nodules differed in all particulars from the papular syphiloderm displayed in other regions of the body.

Among other diseases in this group may be named eczema, herpes facialis and progenitalis, the several forms of the acne, including acne artificialis, acne rosacea, impetigo, ecthyma, furunculus, anthrax, and the varieties of dermatitis which are frequently encountered with a typical development in the subjects of an active syphilis. It is difficult to recognize in the symptoms of these several disorders any difference which can be ascribed to the influence of a co-existing syphilis. The most common, certainly, of these coincidences are the furuncular and acneiform lesions, induced by the ingestion of the iodine compounds administered for the relief of the syphilis. These can be seen both immediately preceding, co-existing with and following the evolution of a generalized syphilitic exanthem. They usually disappear promptly after the withdrawal of the exciting cause, and are rarely, if ever, transformed into syphilodermata. Persistent and disfiguring acne rosacea occurring in the middle and later life of an ancient syphilis, is perhaps more often mistaken and mistreated for a late syphiloderm than any other cutaneous disease.

Herpes zoster I have never seen in a syphilitic subject. It is, however, a disease which occurs commonly but once in a lifetime, and for that reason it may be interesting to note that during the past year I have treated an ex-officer of the army for syphilis following nine months after a severe and typical left zoster frontalis, which also had been under my charge. The patient had calvities of nearly the entire vertex. He exhibited palmar and plantar syphilodermata succeeding a generalized rash, which never spared the region still distinctly displaying the typical, but fading cicatrices of shingles.

It is, however, to the subject of the coincidence

of psoriasis and syphilis, to which in this connection it is desired to direct special attention, as illustrated by the following cases

W N, male, then aged twenty-one years, unmarried, and by occupation an engineer, first consulted me in the fall of 1875 for a disease of the skin, which he said had then lasted for six months. Prior to that time he had suffered from no disease of greater consequence than a short-lived blennorrhagia, which had disappeared without appreciable sequelæ. He was then of medium height, of light weight for his years, beardless, and a decided blonde in the color of his eyes, skin, and somewhat sparse hair. He denied the fact of previous syphilitic infection in his case, a denial fully substantiated by his subsequent history. He had been for a brief time in the care of a reputable physician of Chicago, who had referred him to me for treatment.

When examined, he was found to be the subject of a typically developed psoriasis of indolent aspect. The regions involved were the scalp and forehead sparsely, the trunk, back and belly rather abundantly, and the extensor aspect of the extremities. The hands and feet were spared, as was also the face, with the exception of the forehead. The eruption was developed in typical punctate, guttate, and nummular, sharply-defined lesions, covered with lusterless and imbricated scales, beneath which, after their removal, showed a reddened and glazed, or, when eroded, a bleeding surface. There was no pustulation nor fluid discharge of any kind from the surface. The hairs on the vertex were somewhat pasted to the scalp. The subjective sensations were insignificant. The eruption, in fact, so clearly accorded with the symptoms of the disease recognized in its more common manifestations, that it requires in this connection no further detailed description.

The disease did not at this date suggest by any feature that it would prove as obstinate and inveterate as subsequent events demonstrated. It may be here added that this result was probably largely due, first to a decided lack of constitutional vigor on the part of the patient, and, second, to the nature of his occupation, which required his spending a large part of each working day in fatiguing exertion in the relatively high temperature of an engine room.

This at least is certain, that from the date given above to the fall of 1881, a period of six years, this patient was never for any length of time absolutely free from all symptoms of his cutaneous disorder. I was sufficiently fortunate to retain his confidence throughout the entire period, lasting from my first observation of his case to the present. During this time he has been exclusively under my charge, and repeatedly under my observation at short intervals.

His history during what may be termed the purely psoriatic stadium of his case, may be described in a few words. The disorder exhibited itself in a series of alternate periods of activity and repose, varying naturally in point of duration and severity. During the six years not more than four really severe exacerbations occurred, and in but one of these was it really necessary for him to abandon his daily toil. Throughout the whole the efflorescence was similar

in its general features as to the parts of the surface invaded, the color and contour of the patches, and the character of the imbricated scales. The chief difference was exhibited in the size of the disks. In the most severe of the really aggravated expressions of the disease to which reference has been made (that, viz., in which he was so disabled as to be compelled to abandon for a time his daily labor), the eruption became extensively diffused. But very few islets of sound skin were then left visible on the trunk, and the hands and feet were almost the sole parts of the extremities which remained uninvaded. At this time the inflammation of the skin reached a very high grade. At any one given moment of observation but very few scales could be detected on the surface, though the clothing of the person exhibited them in profuse quantity. The scales, indeed, were so rapidly formed, and after formation sustained so slender a relation to the deeper parts of the epidermis, that the slightest friction by the clothing, the hands, or the medicaments employed topically for the purpose of relieving the distress, swept them at once from their bed. The skin thus exposed was tumid, deep purplish-red in color, and its surface had a glazed appearance, as though covered with a varnish of dull hue. The elevation of the involved above the unaffected integument, as measured at the defined margin of the one rising above the other in a few unaffected islets, did not exceed one millimeter. The entire surface of the chest, back, belly, and thighs presented thus a single sheet of angry, swollen, and deeply reddened skin, with occasional heaps of sparse scales left adherent at a few points. The surface thus involved was distinctly dry. A linen handkerchief passed over any part of it could not be made to absorb a drop of fluid.

The picture presented at this date by the patient, was so different from that of a typically evolved psoriasis diffusa that one studying for the first time the symptoms of this stage, might have been unwilling to accept a diagnosis of psoriasis. There was here, indeed, a close correspondence with the condition described by Tilbury Fox, of London, in 1875, as pityriasis rubra. That it was, however, a true psoriasis of exaggerated type, was demonstrated clearly by the fact that it had not only begun by a display of the strictly classical symptoms of the last named disease, but also in its involution (which did not fail to be declared in the course of a few weeks), distinctly reverted to the same type. The giant patches of diffuse involvement broke up into palm-sized and nummular disks of defined outline and clearing center, often with a slightly raised border and covered with scales of firmer adherence and nacreous hue.

This was the first exaggeration of the disease that occurred after the date when the patient first came under my observation, and though this has been followed by a few others, none have been so grave as this. The eruption began to equal the severity of the first stage, the back, belly and extensor aspects of the thighs were again involved, the scales set together so thickly

mated that about one-half of the skin in these regions was involved. There would be two or three conspicuously defined egg-sized patches on the forehead, a few on the scalp, scarcely any on the face. The hands and feet were at no time involved. After fully completed involution, the skin of the patient would be left in a pigmented condition, with perhaps a very few patches on the sacrum, lumbar region and elbows.

Numerous internal and external remedies were from the first employed in the treatment of this patient, some proving quite effective, some valueless, none with the result of preventing the tendency of the disease to recur. To what extent the mitigation of the malady in its successive periods of activity may have been due to the medication employed, it is difficult to determine. Arsenic was given both in the form of Fowler's solution and Asiatic pills, for long periods of time in maximum doses. When pushed, there was eventually produced, as a rule, a decided amelioration of the general condition of the skin. Iron, phosphorus, copaiba, and the alkalies (the latter for experimental purposes) were also at times employed. Locally, *sapo viridis*, the tarry compounds, chrysarobin, pyrogallol, naphthol, with other substances esteemed useful in the local treatment of the disease, including Turkish and Russian baths, were all at times employed. As with the substances used internally, some seemed for a time of value, some were undoubtedly worthless, none, as has been seen, were capable of completely relieving the skin. The same may be said of a method pursued for a short time in this case, namely, the wearing of under-clothing made of impermeable material for a part of each day.

In the year 1879, this patient contracted a second clap, during one of the intervals between his accesses of psoriasis. It proved sufficiently manageable, but was followed by a stricture of the membranous urethra, which, when it was first discovered, barely admitted a sound of the size of No. 10 of the French scale. This contraction was rapidly dilated to No. 34, when the resulting gleet and dysuria disappeared. It is occasionally necessary for the patient at this time to distend his urethra with a full-sized steel sound.

The uniformity long displayed in the skin symptoms of this patient (and set forth with some detail in these pages, in order that its definite features might be clearly recognized), was not interrupted till the winter of 1882. The patient was then in rather better than average health, and his skin was fairly clear. On the 7th of February of the year named, he exposed himself sexually, with a woman of the town, and first noticed that he had some disease of the privates, on the 7th of the following month, the lesion having thus accomplished an incubative period of 28 days. It may be regarded as probable that the exact incubative period was somewhat shorter than this, since the frequent invasion of the skin of the foreskin by patches of psoriasis, would naturally render the patient rather less observant of any special changes occurring in this portion of his body.

When examined, a pea-sized nodule was recognized on the lower limb of the prepuce, with a slight superficial erosion, and accompanied by induration and

tumefaction of the lymphatic glands in each groin. His sore was at once pronounced to be an infecting chancre. He was given a vinous lotion, and told to bathe the part with this, and to carefully protect it from external irritants by the aid of a pledget of borated cotton. No other treatment was ordered, either internally or externally, and none was, as a matter of fact, employed, the patient having by this time learned to follow orders implicitly.

During the ensuing three weeks the sore healed, leaving an indurated button in its site. The patient was stripped and carefully examined by me every three or four days. On the fiftieth day, after the appearance of his chancre, it could be readily determined that there was post-cervical adenopathy. For the few days preceding, he had been suffering from malaise, substernal pains, and a decided feeling of languor. The skin of the trunk was then rather deeply stained as the result of thorough applications, made some months before, of chrysarobin, but was nevertheless carefully watched for the occurrence of a new exanthem. None, however, could be thus detected. He presented the usual so-called "billious" appearance of the face, with increasing tumidity and tenderness of the cervical and post-occipital glands, between the fiftieth and sixtieth days, during which period two distinct, nail-sized, whitish patches appeared on the right side of the tongue, and a pea-sized ulcer, superficial in site and with a reddened halo, on the inner face of the left tonsil. At this time, then, the patient's condition was briefly this: Mucous patches of tongue, tonsillar ulcer, cervical and inguinal adenopathy, cicatrized chancre, with pea-sized indurated nodule in its site, vague pains, and general malaise. On the body appeared an eruption which was in full evolution by the sixty-fifth day.

At the last named date it could be described as follows. The eruption appeared in smaller and larger, distinctly defined and slightly elevated, large coin-sized disks, covering the scalp, trunk, belly, back, and extremities. The patches were of a crimson reddish shade when deprived of their scales, the latter being imbricated and of characteristic silvery whiteness. In brief, it was impossible for me, after prolonged and careful scrutiny, to recognize any features of this eruption different from those previously exhibited upon the surface of his skin. He also, long familiar with the symptoms displayed upon his integument, pronounced this to be the same in all respects as that spread before his own eyes during the successive outbreaks of the preceding five years.

The patient was now, for the first time, placed on a mercurial course, and all treatment of the psoriatic condition, both internal and external, was for the time suspended. From this date a gradual change was effected in the character of the general symptoms. The eruption, which may be described as psoriatic, slowly disappeared during the ensuing two weeks, and in proportion as it abandoned the surface of the skin the latter became the seat of an efflorescence made up of groups of pustules in series of development. These require a brief description, as, during the subsequent evolution of the syphilis, they constituted its most pronounced feature.

The pustules belonged for the most part, to the variety of syphilitic lesions of the skin, described as the "small flat pustular syphiloderm." They were flattish or globoid in shape and varied in size from the rape seed to the coffee bean. They were most often recognized in groups arranged in the center of deeply reddened and tender patches of skin infiltrated in broad areas. They occurred chiefly over the scalp, nucha, ears, chest, fore arms, thighs and legs. These pustules became rapidly covered with friable uneven, yellowish and yellowish-brown crusts beneath which a very superficial ulceration appeared. As the disease progressed, these ulcers occasionally deepened, especially over the lower extremities, where shallow circular pits formed, requiring a stimulating dressing before they underwent repair. In their completest expression, the appearance of the patches of disease under observation was certainly suggestive of eczema. Peculiarly persistent and characteristic oval patches of this kind, several centimeters in diameter, were thus formed upon the extensor faces of the legs, immediately below the patellæ. These were reddened and oozing, crusted where pustules had originally existed and crusted also in places where there was merely desiccation of the ooze in yellowish-brown, flattened, granular, more or less adherent, poorly contoured crusts, strongly resembling those characteristic of certain forms of seborrhœa oleosa of the face. The surfaces thus affected were often quite painful. At the date of this writing, June 10, 1883, no cutaneous symptoms have appeared more widely divergent from the psoriatic type, than those here described.

During the period which has elapsed since the evolution of the symptoms which markedly differed from those first noted the course of the disease, or diseases, under consideration, has been characterized by a striking uniformity. It may be here stated that the patient, after the appearance of the pustular syphiloderm, was kept steadily under the influence of mercury, administered both by the mouth, by inunction, and by fumigation, the arsenic having been completely suspended up to the first of June last. The reason for the change in the treatment, at the date given, will appear later. The patient kept careful observation of his weight during this period, and when he lost in flesh, he was placed at once upon ferruginous tonics, to the exclusion of all other internal treatment.

It may be said in brief description of the cutaneous symptoms occurring in this case subsequent to the first development of the last occurring disorder, that no lesions of a new or strikingly different type were at any time presented, but that there has been a regular and continuous development upon the skin, of groups of superficial pustules, similar to those already described. These unmistakably decreased in number and in the frequency of their formation, as the treatment progressed. *Pari passu*, however, as these lesions exhibited the changes described, there appeared and spread over certain portions of the body, other cutaneous lesions of a distinctly psoriatic type, totally different from the recognized squamous syphilodermata, apparently taking possession, area by

area, of the field abandoned by the syphilitic lesions. When these two distinctly different varieties of lesions could be recognized simultaneously upon the surface of the skin, the most careful examination failed to detect any combination of the two in what might be described as "mixed" symptoms.

The following description of the condition of the patient on the 14th of last March may fairly well illustrate the points to which attention is here directed.

The patient was weak and anæmic, exhibited a mild grade of post-cervical adenopathy, two mucous patches on the tongue, and some engorgement of the pillars of the fauces. The primæ viæ were in fair condition. A few friable crusts superimposed upon tender finger-nail-sized exuding patches, were distributed among the sparse hairs of the scalp. On the right side of the nucha was an egg-sized tender patch, eczema-form in type where the reddened and infiltrated skin distinctly oozing at several points was also covered here and there with yellowish-red, friable and granular crusts. Precisely similar, irregularly annular, and tender patches swept over the upper rim of each aural pinna. On the brow were two insensitive, circular, small egg-sized patches, perfectly dry and scaling, the scales being whitish and lustrous. On the removal of these appeared moderately reddened, smooth and glazed disks, with a decided tendency to centrifugal clearing.

The back, shoulders, and belly were fairly well covered with insensitive, punctate to nummular, circular, scale-covered disks, showing, when the scales were removed, reddish, bleeding, or slightly glazed surfaces. A few of the larger exhibited annular forms in consequence of central involution. When not subjected to erosion, these lesions were uniformly dry. Not a pustule nor a patch of exuding surface could be seen upon or between any of them. The same general condition, though with the development of far fewer lesions, was recognized upon the arms, forearms and ankles. The hands and feet were entirely exempt, including, of course, the palms and soles, which latter, it may be remarked in passing, were similarly exempt throughout the entire course of the two diseases.

The integument of the penis exhibited several small, dry, scaly or reddened patches. On the right of the scrotum was an area, measuring three by five centimeters, moist, reddened, and tender. Situated nearly centrally as regards the patch, was a friable, dark-brown crust, thickest in its center, of rupioid shape, and as large as a coat button. Beneath it was a shallow, circular ulcer of corresponding size, secreting a thin, puriform fluid. Palm-sized and larger, reddened, and infiltrated areas of integument were to be seen on the antero-lateral aspects of the thighs. These were tender and painful, and a few well formed, split-pea sized pustules, with scanty, interspersed, friable crusts, were here and there visible. Areas, very similarly involved, stretched from below the patellæ to the middle of the anterior faces of the two legs, but here were six or eight button-sized, rupioid crusts, overlying shallow ulcers. Where there were no crusts, there was evidently a slight ooze, from beneath thin, very irregular, ill-defined concen-

tions, resembling those found in certain forms of seborrhœa oleosa. These were the most tender and painful of all the patches on the body. Lower down, or near the ankles, as already intimated, were nummular, psoriasiform, dry, circular, scaling disks, their shining and whitish scaly thatch often projecting beyond the distinctly defined outline of the disk.

The inguinal adenopathy was of moderate grade, and careful observation could still detect a slight degree of thickening in the lower limb of the prepuce, where the initial sclerosis first appeared.

For the purpose of experiment, the iodide of potassium was on several occasions administered in full doses, for weeks at a time, during the progress of the case, without the production of iodism, and with no special effect upon the eruption, which, however, did not fail to pursue its uninterrupted progress toward involution, as indeed had been the case when mercury had been administered in alternation with a ferruginous tonic.

By the first of June the decided preponderance of the psoriasiform over the syphilitic lesions suggested a return to arsenical treatment. This was instituted by administering the combination of the mercuric bichloride, the liquor arsenici chloridi and the tincture of the chloride of iron, with dilute hydrochloric acid, suggested by Professor Goodell, of Philadelphia, and known as his "mixture of the chlorides."

This has been steadily continued up to the present date, July 1, 1883, the patient manifestly improving under its use. He now presents the appearance of one who is affected with psoriasis vulgaris, very few anomalous patches existing upon the skin, and no lesions upon the mucous surfaces.

It is interesting to note in this connection that the patient himself, in consequence of his rather extended study of psoriasis in his own person, was enabled to discriminate intelligently between various groups of symptoms displayed in the course of his case. The impression thus produced upon one who, though most interested in the issue, was yet in total ignorance of the significance of the special symptoms of his two diseases, is certainly not without some value. For this reason, on the 4th day of June, 1883, I had him remove his clothing and seated myself, pencil and paper in hand, immediately before him. The following questions were asked him by myself and his responses were taken down *verbatim*, at the time. It is necessary to explain that the words "new" and "old," as applied to his diseases, were terms which he had himself gradually come to employ in the course of his relations with me.

"Mr M," said I, "I desire to verify by your own statements my notes of your case, which now extend over a period of several years. I propose to ask you some questions and to write here your answers. From the time when you first became affected with your old disease (that is, psoriasis) to the date when you first acquired the new disease (that is, syphilis) were you ever entirely free from all traces of the former?"

He responded "No, sir, there were always some patches of the old disease about me, even when I was not suffering from the severe attacks."

"Well," I returned, "that period extends from the fall of 1875 to the fall of 1882—over six years. In that time do you think that you had become so well acquainted with the symptoms of your skin disease as to be quite sure of recognizing them under all circumstances?"

"Yes, sir, I am quite positive that I could."

"Now, returning to the earliest eruption, after you acquired syphilis, to which disease did it belong?"

"It belonged to the first, there can be no doubt of that. I remember it particularly because you said that the old disease would probably be somewhat modified by the new one, and I was considerably disappointed when I found at first it was nothing less than the same old eruption."

"What happened next, do you remember?"

"Yes, the old went away for the first time, completely, since I had it, and then the new one came on."

"Was there then any of the old mixed with the new?"

"No, it was all the new."

"Are you sure of it?"

"Yes, sir, quite sure."

"Has any of the old appeared since then?"

"Yes, it has appeared since."

"Have you now upon your person any of the old disease?"

"Yes, sir, the new and the old, both."

"Have you until lately seen any of the old?"

"Well, I will tell you just how it has been. First, it was all old, then it was all new. Then gradually there was more and more of the old, and less and less of the new."

"What would you say was the difference between the new and the old, and how do you recognize this difference?"

"Why, that is simple enough. The old began as a sort of small red bunch or spot, then it would scale, and you could see the red about the scale. This new disease never does that. It forms a sort of gum, and then oozes and dries. The old had a smooth scale. The scale of this new disease crumbles up, which the old never did."

"Now I will ask you if you can tell me to which disease the several patches now visible upon your body belong."

"Certainly, I can."

"What are those on your forehead?"

"They are those of the old disease."

"What disease produced those on the belly?"

"The old."

"What disease those on the back?"

"The old."

"What disease those on the buttocks?"

"The new."

"What disease those on the knees?"

"The new."

"What disease those on the legs?"

"The new."

In this way the patient very promptly and confidently answered each question that was addressed him. It certainly occurred to me that his responses were made with an accuracy greater than that of the

medical man who is not specially expert in the diagnosis of cutaneous affections

The only other case which has fallen under my observation of syphilis in a psoriasis patient, may be more briefly described. The patient was an unmarried man, 22 years of age, slim in figure, and a dark brunette in complexion. He lived in a neighboring State, and I saw him but rarely. In the fall of 1881 he visited me for the purpose of being advised respecting a typical and fairly well generalized psoriasis, displayed in coin-sized patches over the dorsum and anterior face of the trunk—in more diffused areas over the scalp, and in still smaller disks over the elbows, forearms, knees and legs. These were typical in aspect, though of a decidedly dark livid hue when the scales were removed, a feature not uncommon in indolent patches of psoriasis when seen upon very dark skins. The hands and feet were exempt from disease. Many of the disks on the trunk were annular in shape, as the result of centric involution.

He remained for two weeks under observation, and then returned to his native place, writing me several

regions were involved, viz, the scalp, the trunk and the extremities. The face, hands and feet were exempt. The disks were guttate and nummular, quite dry, well covered with scales, and merely did not exhibit, as they had before, the clearing center where involution had been in progress. There were no pustules nor infiltrated and weeping patches, such as were seen in the case described above. The eruption was displayed rather more plentifully than at the date of its previous examination.

Certainly there was here no cutaneous symptoms of systemic infection, the syphilitic influence being limited in expression to the subjective sensations, the evident crachevia, the engorgement and enlargement of the glands, the moderate desquammation capillitii, and the lesions seen upon the mucous lining of the palate and mouth, the complexion of the whole occurring after an incubative period. The skin was without question, in a purely psoriatic state. It is, however, to be admitted in this case that it was not absolutely clear that an unusually prolonged incubative period had not occurred, while it is a matter of fact the patient was not sufficiently long under observa-

not in the direction of the psoriasis, nor of any similar disease. If such a modification be admitted in this case, as the result of the specific influence exerted by the psoriasis, it was in the direction of the eczematous, and not of the dry and scaling exanthematous.

But, 8 The modification, here to a degree recognized in the course and features of the syphilodermata, need not be explained by the supposition that the psoriasis exerted a specific effect upon the other disease. It is reasonable to conclude that any prolonged cutaneous affection, one also long treated by external remedies of a stimulating character, would leave such an impression upon the skin as to somewhat modify its expression of the syphilitic influence.

9 It is interesting to note here, that the palms and soles were not invaded, regions where the differential diagnosis between the two diseases in question has been studied with special care.

10 Indeed, surveying the points upon which stress is generally laid in establishing a differential diagnosis between the two diseases, it will be seen that when the two co-exist, the value of these diagnostic differences, however great under other circumstances, is then materially diminished. These points are, the symmetry of the one disease and its relative failure in the other, the palmar and plantar involvement, already referred to, the abundance, or the reverse, of the scales, the size and degree of infiltration of the involved areas, the color of the patches, the establishment of a neoplastic development in the skin of certain syphilitic subjects, and the well-known tendency of psoriasis to invade the regions of the elbows and the knees. It is a sufficient commentary on all these points to refer merely to the fact, well illustrated in the cases here reported, that the syphilitic patches of moist and eczema-form type, were found over the extensor faces of the knees, and that the typical psoriatic disks were not seen here, but in perfect development over the belly, the forehead, and the scalp.

This subject may be well concluded with the briefest reference to the coincidences of a few other non-syphilitic diseases with syphilis. In class IV of the hæmorrhages, is named purpura rheumatica, or peliosis rheumatica. I was lately asked to see a patient in the Cook County Hospital, of Chicago, with Drs. R. N. Isham, N. Bridge, J. H. Hollister, and others. The man was unmistakably affected with the symptoms of land scurvy and syphilis. He was not in a condition to give an account of himself, and it was hence difficult to determine which disease had preceded. Numerous coin- to palm sized hæmorrhagic patches, some evidently of long standing, were distributed over the trunk and limbs, and there had been hæmorrhages from the mouth and nostrils. A recent pustular syphiloderm, with small-sized lesions, was dispersed among the hæmorrhagic patches, rarely over the discolored parts, and traces of the induration of the initial sclerosis with inguinal adenopathy, could be recognized in the genital region. We had no difficulty in going over separately each region of the body, and determining what lesions should be ascribed to each of the two diseases present. Sufficient was known of the history of the case, to make it cer-

tain that the patient had the scurvy before he suffered from syphilis.

In Class V of the hypertrophies occurs argyria, several typical cases of which have been observed in syphilitic subjects. Yindell's two cases (*American Practitioner*, September, 1872) are reported as having been relieved by mercury and iodine. I have seen two typical cases in syphilitic subjects, both presented in public at my clinic. The bluish slate color produced by the silver nitrate was finely exhibited on the face and upper portion of the chest of each patient, regions spared by the syphilodermata elsewhere visible in each case. The patient, it may be said in passing, believed the dyschromia to be the result of the infection.

A male patient, twenty years of age, affected with congenital ichthyosis simplex, presented himself to me in the fall of 1880 with an infecting chancre of the prepuce, followed by a rather severe form of syphilis. The ichthyotic disorder of the skin had almost completely spared the face, being decidedly in best expression on the extremities, including the hands and the feet. In this case the prominent symptoms were those of syphilitic involvement of the mouth, throat, and larynx, which complications were both prolonged and obstinate. On the skin there was seen at one time a development of the small, flat pustular syphiloderm, conspicuously about the mouth and anus, and over the scrotum. The alopecia with remaining dry, lusterless hairs was considerable. In those parts of the extremities covered with typical and distinct polygonal and diamond-shaped ichthyotic plates, no syphilodermata were at any time recognized. The cutaneous symptoms throughout were indeed trifling. The patient was under my observation for two years in the city of Chicago, after which he removed to Montana. Though naturally of a delicate constitution, he made a fair recovery, and wrote me lately that he was under an engagement to marry.

Class VI of the atrophies included alopecia areata. I confess that during the past two or three years the suspicion has been more than once awakened in my mind that syphilis might be one of the several exciting causes of this singular disorder. I have notes of four male patients, all in early adult life, who exhibited alopecia areata of the region of the beard, during the first year after syphilitic infection. Of course the question arose in each case, Was not this a form of alopecia syphilitica of the region named? In all these cases the defluvium capillitii was sudden, and involved perfectly well-defined, abnormally white areas, varying from the size of a silver dollar to a hen's egg. Each was completely destitute of even a single hair filament, when examined, not even lanugo hair appearing under an inch objective. These bald patches were in no instance either preceded or followed by syphilodermata of the affected areas, the hairs, also, of the unaffected regions of the scalp and beard being retained in normal vigor and abundance. In one place a few patches formed on the scalp. Two were exceedingly well-marked representatives of the Jewish race, with abundant growth of jet-black hairs in the beard. Only one of the four had what might

be termed a severe form of syphilis. He presented himself at the first exhibiting a generalized papular rash, with a few pustulo-crustaceous lesions about the nose and cheeks. A group of these ulcerated, and left a characteristic bean-sized scar in the center of the right cheek which I have had the opportunity of examining afresh since this paper has been in preparation. The alopecia areata appeared later, and spread beneath the angle of the jaws, sparing the region of the scar left by the syphilodermata.

It need scarcely be remarked, in conclusion, that the diseases in the last class, produced by the animal and vegetable parasites, are seen in equal development on the skins of the syphilitic and non-syphilitic. The former furnish a list of patients figuring in all statistics of dispensary, hospital and public practice. As a rule, no modification in the symptoms of these disorders can be determined, when they are studied on the syphilitic skin. Ringworm in uncomplicated forms I have seen several times on the beard of the subjects of an active syphilis. Tinea versicolor might almost be described as of common occurrence, on the chests of adult male syphilitic patients applying for public relief. I have often observed this coincidence without making note of it, and therefore merely refer here to the six last cases observed by myself. One of these concerned the breast of a young woman, infected by her husband with syphilis. The characteristic patches of the parasitic disease were in all unmodified, and the microscopical appearances of the fungus were those commonly seen. In three of these cases the disease was supposed by the patients to be of syphilitic origin. In no one was there any difficulty in removing the mold by the proper measures.

The animal parasites flourish with even greater frequency, on the filthy skins of many of the syphilitic patients of both sexes presenting themselves at the dispensaries of the large Western cities. As for the lesions which they induce upon the syphilitic skin, and between syphilodermata, it has been before remarked that the advanced students attending the clinic are enabled to point out the individual signs of the one and of the other disorder on the same skin. I cannot recall a case where the largest invasion of the skin by bugs and lice, has made the diagnosis of syphilis, in dispensary and clinical practice, a matter of difficulty.

If time permitted, it would be interesting in this same connection to review briefly the disorders of the human system not attended with cutaneous lesions, whose evolution progresses in the syphilitic patient, apparently without interchange of the resulting phenomena. I have seen several well-marked cases of pulmonary phthisis and Bright's disease of the kidneys survive, contrary to my expectation, a syphilitic infection. During the past winter, my colleague, Dr Chas T Parkes performed ovariectomy at my request, upon a female patient under my care, affected with gummata of the lower extremities, some of which had left palm sized cicatrices upon the anterior faces of the lower extremities. The ovarian fluid and tumor together weighed in this case 18 pounds. The patient recovered without a single mishap, and consulted me

in two weeks after she had resumed her usual avocations, for a recurrent tibial osteoscopic pain.

My apology for the length of these remarks is to be found in the very generally received opinion, to which reference was made at their outset. It seemed to me that the time has come, when it should be more distinctly recognized that syphilis is syphilis, and not essentially any other disease, that its symptoms are to be regarded as trustworthy signs of its existence and of the existence of no other disease, that the loose opinion respecting a so-called "syphilitic element" in any doubtful case, is usually begotten by a faulty diagnosis, and, finally, that syphilis may co-exist with a long list of diseases, without betraying an essential modification of either the one or the other.

PÆDIATRIC THERAPEUTICS AND ITS RELATION TO GENERAL THERAPEUTICS

BY J B CASEBEER, M D, AUBURN, IND

[Prepared for the Section on Diseases of Children June 1883]

In a lecture delivered recently to the class of medical students at Bellevue Hospital Medical College by my former preceptor, a thorough gentleman and scholar, Prof A A Smith, on the frequent repetition of doses of medicine, he clearly opens up a field of investigation which, to my mind, is one of the greatest importance. It is as it were a rich mine of truth heretofore but slightly developed, and only been tested by the skilful assayer sufficiently to certify to its intrinsic value, and in it we may find leads of rare value, some of which he there uncovers so that we may peer in on its richness and beauty.

I believe and trust that the time is not far distant when from them we will learn important and practical lessons which will greatly contribute to our success in our battle with disease, and thus bless our noble profession as well as our beloved humanity.

One of the very important questions of the day now is, do we seek for the *physiological* effect of medicines, or do we derive their full *poisonous* or *drug* effect when we administer them to our patient?

If the former (and to my mind that is what we usually seek for), then certainly that can be better obtained and maintained by the small and frequently repeated doses, and thus, too, we can the better avoid the deleterious and often dangerous effects of the latter. The doctor in his lecture gives us his experience coupled with the experience of some others in the small and frequently repeated doses of chlorate of potash, croton chloral, bicarbonate of soda, balsam of copabia, atropia, the bromides, chamomilla, tartar-emetic, nux vomica, cantharides, pulsatilla, callabar bean, ergot, aconite, hamamelis and belladonna. The experience he narrates to the class is quite strange and interesting indeed, and certainly pregnant with important facts and suggestions. Perhaps would have paid less attention to it not had the same experience in the use of such medicines mentioned, and knowing by that in them the doctor was correct, I was

encouraged to test some of the others also, which I find stand the test. I am very much obliged indeed to Dr Smith for that lecture, the reading of which to me was of peculiar interest, partially perhaps because I had been studying and experimenting in the same direction and was thus aided and encouraged, and also because I believe it leads us in the proper direction and into territory that after careful survey will discover to us principles that will tend to the permanent exaltation of our profession by rendering it more efficient in the glorious work in subduing disease, and thus the more fully a blessing to suffering humanity. I trust that we may as a profession follow in the direction he thus points and where he may lead. If not regarded as presumptuous, I would like to add my feeble testimony in support of the doctor's statement as well as a little additional of my own experience and observation in the use of aconite, belladonna, nux and ipecac, and also bring into the same category lobelia, sclepias, baptisia, santoline, hyposulphite of soda and veratrum viride. And this I will endeavor to do briefly, not stopping to give a theory or reason why but, like my illustrious friend, content myself with the statements that any one can verify for themselves and then form their own theories, and in this I will endeavor to confine my remarks to the treatment of children especially.

I have fully verified the happy result of Dr Smith in his experience in giving one-third ($\frac{1}{3}$) to one-half ($\frac{1}{2}$) minim of tincture aconite every 15 to 30 minutes to his adult patients in fever. I have often found that in children suffering with fever, hot skin and dry throat, restless, with feeble, frequent and thready pulse, the best prescription I can give my little patient is 3 to 5 minims of tincture rad aconite put into four (4) ounces of water, and to a patient of 2 years old give of this mixture one teaspoonful every 15 minutes. Under this treatment my patient will soon begin to rest, the pulse becomes less frequent, soft and of better tone, perspiration will soon be manifest the temperature will come down, more secretion of the mouth and throat is established, croupal symptoms will subside, tonsillitis, pharyngitis and bronchitis, if present, will be ameliorated. Aconite is capable and has produced such excellent results in the treatment of children that some are desirous of calling it the childrens' medicine, but experience proves that where it is appropriately used in proper doses its effects are just as desirable when given to the adult. If an inflammation is actually attacking our little patient, and is manifested by a full bounding pulse, this can be better controlled by the use of 2 or 3 drops of Norwood's tincture of veratrum viride either as a substitute for or in connection with the aconite in four ounces of water given similarly. If diarrhoea with fever exists, the use of the 3 drops of aconite with 3 to 6 drops of tincture ipecac in 4 ounces of water is given in teaspoonful doses every 30 minutes the results will be very desirable and even surprising to those not accustomed to its use. The same is true in proportionate doses when used in the adult.

It controls nausea and vomiting when thus given in small doses.

Belladonna in small doses, as the Professor suggests, gives us excellent results, especially with children, and is also capable of extensive application. If given in small doses will give surprising results (perhaps as a capillary contractor) in case of local congestion. In pulmonary congestion, when combined with aconite or veratrum, if specially indicated by the full bounding pulse, I have no doubt, if used in time, by far the majority of pneumonias and local inflammations can be aborted. If our little patient is dull and drowsy, face restless or expressionless, circulation feeble in the skin, as indicated by a livid color, the capillaries slowly filling after being emptied by pressure, or in the brain, as indicated by a dilated or immobile pupil, or in the bladder, as indicated by the passage of large quantities of limpid urine, or incontinence and involuntary discharge of urine—nothing have I ever found so reliable in moving these abnormal symptoms, with their causes, as small doses of belladonna frequently repeated. Dose for children two years old, for example, about one-eighth to one-fourth minim, repeated every one or two hours, as symptoms require, excellent also in the debilitating night sweats of the adult in proportionate doses. Doubtless the experiment of Brown-Sequard first led the profession to the use of belladonna in all congestions producing dilatation of the capillaries of blood-vessels, as they thus proved its special influence was to contract the capillaries.

In this respect it is the opposite of gelseminum, whose special province seems to be to control irritation, thus to stop or lessen the determination of blood to a part, and thus preventing the congestion by removing the cause, but where the congestion is fully established, a partial paralysis, and thus dilatation of the capillaries is produced, then belladonna becomes the appropriate remedy.

In eruptive fevers its influence is to bring the eruption to the surface by overcoming internal congestion, and thus equalizing the circulation by determining to the skin. I believe when we better understand the nature and influence of the deadly night-shade, its belladonna and atropine will occupy a still more important place in our materia medica, and especially in the prescription of the coming physician.

NUX VOMICA

Some one has said that nux vomica is the tonic of children.

It is received kindly by the stomach, improves the appetite and digestion, as well as tones up the debilitated nervous system.

It thus proves itself to be the remedy in nausea and vomiting, as well as infantile colic and irritation of the brain and spinal cord when due to enfeeblement.

One or two drops of the tincture in four ounces of water, or five to fifteen to the adult, one teaspoonful given every twenty minutes will give us excellent satisfaction if our case is properly diagnosed. We like its effects in diarrhoea of children, where the abdomen is full and flaccid, and especially where the pain is

similar to colic and located at the umbilicus. In cholera infantum it is one of the important remedies if there is atony of the bowels, with enfeebled innervation and circulation.

IPPECAC

Why does the medicine whose special province heretofore has been to produce nausea and vomiting now prove itself so efficient (as the Professor reports) in obstinate cases of vomiting and diarrhœa, when given in small doses frequently repeated? In my mind the question arises, is not the kind physiological effect of ipecac always to relieve irritation of the mucous membranes, and its drug or poisonous effect the opposite?

To satisfy the skeptical mind, let the intelligent practitioner try it in cases of irritation of the stomach, bowels, or bronchial tubes, in small dose, such as tinct ipecac two to ten drops, according to the age of the child, in four ounces of water, and given one teaspoonful every fifteen to fifty minutes, and in adults in proportion, and when he obtains the certain relief from obstinate nausea, vomiting and diarrhœa which he certainly will when due to irritation, diarrhœa of the simplest form to the severer cases of cholera infantum or dysentery, and when accompanied with fever, combined with similar doses of aconite, then let him answer in his own mind whether he is better pleased with the physiological or drug effect of the remedy. In this respect ipecac seems to be the converse of *nux vomica*, which proves so efficient in the same disease, when due to enfeeblement or atony instead of over-excitement or irritation.

LOBELIA

Let us hastily glance at this, another of the nauseant and emetic medicines when given in full doses. Like its relative, *ipecacuanha*, its physiological is different from its drug effect. Given in cases of difficult or oppressed breathing, suffusion of the face, congestion, and especially in mucous rattling of the bronchial tubes, small doses of lobelia will improve innervation, give energy to the oppressed organs, and enable them to throw off the congestion and over-supply of mucous secretion, while in a little larger doses, short of its emetic effect, it is an excellent antispasmodic in croup, asthma, and, in the hands of the obstetrician, proves a kind and valuable remedy in overcoming the rigidity of the *undilatable os uteri*, when given in one drop doses, repeated every fifteen to twenty minutes.

BRYONIA AND ASCLEPIAS

These two medicines, whose special province seems to be to allay irritation of serous membranes, sometimes surprise us with their kindly and positive influence.

Well do I remember, some years ago, of attending on a Mr F, æt 40 years, German descent, usually healthy, strong and robust, but then suffering with severe pleuro-pneumonia, and most intensely with the pleuritic stitch, which was so interfering with respiration as to be alarming at times, and after prescribing the usual sedatives, aconite and veratrum for fever,

with full doses of Dover's powder and morphia to control the pain, and feeling confident of early relief, I repaired to the country. But some hours after my visit, instead of the expected relief the pains in the chest became more severe and the interference with respiration more alarming, and another physician, my friend T G Matheny, was called to administer to him until my return. His prescription was tinct bryonia and tinct asclepias aa gtt, $\times \times$, water, $\mathfrak{z} \text{iv}$ M, sig One teaspoonful every thirty minutes until pains were relieved, and every hour thereafter.

On my return and learning the above facts, and having confidence in the intelligence of the physician, and seeing the relief approaching, I continued the above prescription, not resuming the opiates, which had been set aside. Next morning I found my patient almost entirely free from pain, and fever very much abated, perspiration well established, and my patient very cheerful.

During the week following the pains would occasionally return, but would again subside under the influence of the bryonia and asclepias. This repeated experience strengthened my resolution to study to know more of these remedies, and to more fully test them in other cases, which I did, usually with good satisfaction. After careful study and experiment, I find, as I believe, the physiological effects of bryonia to be sedative to serous membranes especially, and thus a remedy in irritation of such membranes, whether of the chest as in pleuritis, or in the joints as in articular rheumatism, or abdomen as in peritonitis, and more especially if the pains are lancinating and accompanied by a tension of the muscles of the affected part, and excessive tenderness on pressure or motion of the parts, accompanied with restlessness, high fever, hot skin, and hard chorded pulse, asclepias, as a type of diaphoretics, certainly quiets the nervous system, brings down the temperature, induces perspiration, relieves pain in serous membranes, and is thus a valuable remedy in such inflammations, and especially when accompanied with a hot, dry skin.

BAPTISIA

Although I have used this remedy for many years in my treatment of children in septic fevers, believing it to be antiseptic and thus antifebrile, I confess, however, to many disappointments in its use, and a very imperfect knowledge of its real nature, and although we think we know more about it now than we did in former years, yet we know but very little, compared to what we believe is to be known of its therapeutic properties.

I remember reading an article written by Prof Scudder, of Cincinnati, in which he regarded it as an antizymotic, and its antiseptic and antifebrile properties depending on its power to antidote a peculiar ferment or poison in the blood causing the attendant fever, and this having peculiar manifestation, different from any other poison, producing a peculiar dusky color of the face, like one who had been exposed to severe cold. He recommended it in cases where the sepsis produces a deep red or violet color of the mucous membrane, with brown or black shade or

tinge, and especially where there is foul breath, with a tendency to ulceration, and since using it in that class of cases, and in ulcerative sore mouth and throat, especially where there is any putrescence, both locally and internally, I am the better pleased with its effects

Dose to child

Tinct baptisia gtt ʒ to ʒʒ
Aqua dist ʒ iv

M S One teaspoonful every one or two hours

SANTONINE

We usually think of santonine as a vermifuge only, in which it stands at the head of its class, but it has other important properties. I will not tarry now to discuss how or why it has a peculiar influence over the bladder, which renders it so efficient in overcoming, in some special cases, that severe burning or scalding sensation and tenesmus of the bladder, but only stop to say, in addition, that in some cases of retention of urine, a few small doses of santonine will prove to be the remedy *par excellence*.

HYPOSULPHITE OF SODA

Last but not least, I wish to notice briefly hyposulphite of soda

Standing as it does in the list of alkalies, and fulfilling their general indication, yet it seems to subserve a special purpose of its own. If we have acid fermentation in the stomach, indicated by acid eructations, coated tongue, or rather furred with a white or grayish-white or dirty color, accompanied, in children especially, with colic and green acid discharges of the bowels, we naturally think of alkalies. If our patient is suffering with boils or abscesses of the cellular or muscular tissue, we say lime is the remedy, as it is the salt which preserves these tissues, or if the coating of the tongue is a clean white, in the absence of any destruction of tissue, we use bicarbonate of soda, believing that through its influence on the blood it influences nutrition as well as antidotes the acid, but when we have the dirty gray or brown color, tongue pallid and broad, accompanied with foul breath and fever, then the antizymotic influence of hyposulphite of soda will correct all, and lead our patient out into the sunlight of health and happiness.

I have thus briefly dwelt upon some of these remedies, and referred to my own experience, with that of others, and thus challenge the attention of this Section for the purpose of showing as practically as I possibly can, the true relation existing in the treatment of children and adults, believing that if we candidly consider the true relation, we will reasonably conclude the way to treat children is to consider them human beings—offspring of their parents, subject to like infirmities and diseases, and to be similarly treated with proportionate doses, and this will simplify the study for the earnest student and enhance the sufficiency and proficiency of the therapist.

It is in the interest of the children also that I ask the intelligent attention of all concerned and especially the college teacher, to the similarity of medi-

cation in all ages, and that to be suggested by the existing symptoms—not allowing the name given to the disease or name or age of our patient to drift us from our moorings, but ever aim to overcome the existing symptoms by their appropriate remedies. We should also encourage careful observation on the physiological action of medicines, as being of equal if not of paramount importance to its toxic effects (for I believe the former is what we usually desire), and thus we will be the better enabled to apply our remedies more intelligently and directly to the relief of the existing symptoms.

TRI-STATE MEDICAL ASSOCIATION.

PRESIDENT'S ADDRESS, INDIANAPOLIS, SEPT 18, 1883
BY WM PORTER, M D, ST LOUIS

GENTLEMEN

In calling me to your chief office, you have given graceful recognition of that department of our work in which, with many good comrades, it is my fortune to be enrolled. For this, and for the personal compliment, I thank you. Such an act by such an Association as this, shows that here, at least, there is no conflict between those who endeavor to combat all the physical ills of humanity, however classed, and those who are devoted to special labors.

In acknowledgment, I had at first thought to present a report upon a special topic, but, thanks to the widely distributed medical journals of the day, and the compilations and reviews on every hand, there is little necessity for such a rehearsal. Moreover, I am not here to investigate laryngeal diseases or thoracic degeneration, for with you, in this good cause, there is neither aphonia nor faulty heart-action.

Therefore, gentlemen, I have chosen to speak very earnestly to you regarding the interests of this Association, and to use the position you have given me, for the cause we all hold dear. Just now, when our ranks are being rapidly filled, and our organization claiming and receiving the notice due it, cool heads, warm hearts and determined spirits are needed, that advantage may be taken of the incoming tide of favor.

One of the dangerous periods in the history of a medical society, as with a nation, is that which follows a successful struggle for existence. Then, when full life has been attained and opposition from without been silenced, sometimes a strange apathy, a satisfied drowsiness, steals over all, and soon we write, "*Illum fuit*," or, as we would apply it, "the late medical society." If with nations "the price of liberty is eternal vigilance," with us, the cost of successful medical organization is eternal work.

Thus far we have, in the rapid progress of the Tri-State Medical Society, cause for congratulation. Much we owe to those few earnest men (need I name them?), who first laid the foundation and have since aided in every advance—to what purpose let this assembly answer. Year after year our numbers have increased and new fields have been added, medical journals from all sides seek our reports, and good friends from distant States visit us. The president of

our National Association sends us greeting, from the great heart of Gross comes a warm "God bless you," and from over the ocean comes words of cheer from our last year's honored guest—Mackenzie

OBJECTS OF ASSOCIATION

HAVING, then, attained this measure of success, let us see what we are here for, and take counsel for the future

1 *Personal Acquaintance*—One of the chief results of a regular attendance upon the sessions of almost any medical association, is an extension of personal acquaintance. This is a much more important matter than would appear at first sight. A recent writer says, "to know a man personally is generally to estimate him aright." Many a man can in the quiet of his own library, shut in from his fellows, write an attractive essay or composition, and yet may be of little worth in the sessions of an active medical society. Such a one is generally a failure in securing and maintaining a private practice. His want of success is not because he is a student, but because he is nothing more. I pity the man who is known to his fellows only through the medium of a printing press. The touch of a physician's hand brings him nearer to you than all the tracings of his pen. True scholarship is a royal attainment, and the press has placed the stamp of nobility upon the quiet brow of many a recluse, but to research and book lore a successful physician must add personal acquaintance with, and practical knowledge of, his fellows. The agency of medical societies in contributing to this result cannot be ignored, and a man's progress may often be traced by the impressions made by him upon his society's records.

2 *Harmony among the men of the West*—While one of the objects of this society, in common with others, is the cementing of valued friendships and the attrition and brightening influence of personal contact, yet we have, even in this field, a more definite work.

The members of this Association are from different parts of our great Western Empire, and different State and local societies claim us. Living in these days of rapid travel and easy communication, harmony should prevail amongst us, and does. Still, except in this Association, there has been no general movement to organize our sectional elements, to bind these workers together, and with united effort to keep pace with the mighty advance of other interests around us. In other callings, I see

"Men, my brothers, men the workers,
Ever reaping something new,
That which they have done, the earnest
Of the thing that they shall do"

We have no need to blush for our own guild, but each year brings a more pressing need for union and harmony in our ranks, as well as for a better knowledge of our professional resources and advances.

In these days, societies having certain objects in view are rapidly formed, and there are special associations for almost every department. Now, let this be a special society, or rather, a society with definite objects, and these—personal acquaintance, harmony,

and professional advance in the West. We want this, let us have it.

SPECIAL FEATURES

1 *Non-Legislative*—There are some points of difference between the work of this Association and that of most medical organizations. As far as possible, it is non-legislative, all our time being given to scientific work. It has been said that its success is inimical to the interests of the different State societies, and to the American Medical Association. This is in no sense true. The men here are among the active members of the State organizations of the West, and leaders in the numerous district medical societies. We aim to refer all complaints back to such societies, and are not constituted a court to try local grievances.

2 *Loyal*—More than this, there is probably no large society in our land, the members of which more uniformly respect and endorse the formulated principles of the National Association. I congratulate you, gentlemen, that there has been no "ethical" wrangle here, and that those guiding lines laid down by Percival eighty years ago, are honored by us to-day. We yield to none in loyalty to those undying principles which have become the watchword of professional integrity throughout the English-speaking world. Let us be very honest in our position. The Code, when intelligently understood and followed, cannot be successfully attacked. It is only when misinterpreted, and made a cloak and a defense for charlatanism and selfishness, that reproach is brought upon it. He who would bring a good law into disrepute by false rendering and oppressive enforcement, is a greater criminal than he who ignores all law. The latter acts for himself, the former brings the vast machinery of the courts to aid him. There are men who would use the Code as an instrument of torture, were it embodied in the Declaration of Independence, and there are others who would oppose it, had it been the preface to the Ten Commandments.

3 *Three Sessions Daily*—It was certainly a proof of the earnestness with which our work has been carried on, that three years ago two propositions were accepted. The first was that we decline, with thanks, all invitations to receptions, banquets, etc., that would attract us during our sessions from our proper work. This seemed severe, but the citizens at our meeting places have understood it. We value their attentions, but work is the order of the day in these ranks, and we have plenty to do. Besides, we wanted bees and not flies.

4 *Limit to Papers*—A second proposition was the limitation of papers to twenty-five minutes. This, too, has given a good result, for instead of a few elaborate, exhaustive, and too often exhausting, essays, we have time for more concise, practical communications, clinical reports, and discussions. These changes having become laws, I would not discuss them, we knowing their good effect.

SUGGESTIONS

1 *Note-Taking*—Let me take this opportunity of urging the importance, the almost necessity, of more attention to note taking and recording and reporting

clinical facts While a few men write too much and too often, most men do not write enough I can point you to men with large experience and grand opportunities for investigation, men of sober judgment and apt in their calling, who have not placed one single observation on record Such lives are too valuable, such knowledge too dearly bought, to be sealed up when the lips are closed forever Though the fleeting hours speed hurriedly out of sight, "thou hast not lost a day of which there is a record"

There should be a due proportion between the daily routine of practice and the literary work of the physician A small percentage only of experience is catalogued for the benefit of others One may be able to act promptly and speak wisely, and to little purpose, but—

"A small drop of ink,
Falling like dew upon a thought, prevails
That which makes thousands, perhaps millions, think"

There is no danger that concise, well-matured writings will be crowded out of sight The drift wood will float away, but that which is chosen by experience and fastened by logic will remain A few sentences, carefully chosen and modestly indited, have saved many a man from oblivion

2 *Official Reports*—A practical suggestion here presents itself One of the features of this Association is the discussion had upon the different topics introduced Heretofore much of this valuable material has been lost, and at times very imperfect abstracts of papers have been furnished the journals Thus far the medical journals all over the country have given us substantial aid, and it is not only to our interest, but a just return to them, that accurate reports of our proceedings are made

We should have official reports, compiled and condensed under the direction of our Secretary or Committee on Publication This would give at least a standard from which such periodicals as deserve our transactions could make abstracts This year, happily, a number of journals are well represented by correspondents, and we should next year increase their facilities for securing our records We believe the Association has acted wisely in deciding that our proceedings be placed at the disposal of the journals rather than published in book-form

3 *District Aids*—To a further suggestion I would ask special attention The interests of this organization are now so important that no one of them can be neglected It is impossible, owing to the extent of our territory and rapid increase in membership, that the few chief officers can have full knowledge of the whole work Our success depends upon individual effort Let us choose men in each Congressional District, or in each local Society, who shall keep our Association in mind and use their personal influence for its advancement To some extent this has been the method pursued during the last two years, and it has answered well

Extension of Territory—Another question that ere long we must decide is that of extension of territory Originally including the three States, in a few years Cincinnati and St. Louis were added, which, with Chicago, Louisville, and the cities and counties al-

ready enrolled from Kentucky, Indiana and Illinois, gave the Association a large following Delegates from beyond these confines are now sent to us, and men from other States ask to join us

The name "Tri-State" is a household word with many of us, but the mountain stream loses its identity in, though it may give character to the river of the plains What better structure could be built upon the solid foundations of the Tri-State Medical Society than the stately walls of a Western Medical Association

Increase of Time—Added territory and coming years bring the certainty of added work at our sessions As it is now, great economy of time is required, even though we hold three sessions daily In another year it will probably be necessary to extend our time to four sessions, or to divide into sections during some of the sessions The latter should only be considered when it becomes unavoidable We can work a little longer, and move up a little closer, but let us not divide If it should be that sections must be formed, let but the afternoon sessions be so changed, continuing general sessions both morning and evening

Selection of Officers—One other thought I beg leave to introduce The selection of officers is a duty which each year demands more care It is certainly often embarrassing for a president to choose a committee to name his successor, and at all times the best effort should be made to secure full representation and free choice Might we not ask that the delegates from each State choose a member of the Nominating Committee, who shall represent the interests of his State in selecting the officers and place of meeting for the coming year?

And now, after a year's patient seed sowing, your committee have secured a bountiful harvest In just appreciation of their labors, I ask in their behalf a prompt attendance upon the order of business which they have furnished Let these three days be grand, good days for our work—an epoch in the history of our Association

A CASE OF AMPUTATION OF THE BREAST—WITH REMARKS.

[Read before the Philadelphia County Medical Society Sept 17]

BY H. LEAMAN, M.D.

Mrs. J. J. W., age 48, married 29 years, the mother of eight children, and the recipient of ten severe miscarriages, came to my office Sept. 1, 1882. She had first noticed this tumor in her breast three months previously. Her attention at that time was called to the swelling in her breast by a small pimple on the surface. Up to this time there had been no apparent change.

A tender enlargement, the size of an English walnut, situated deeply in the inner lower quarter of the left breast. During the past week—for the first time—sharp, shooting, retracting pain, piercing the nipple, had been experienced more frequently.

Menstruation ceased six years ago, without giving rise to any trouble. She had no cachexia, and was apparently in her usual health. On the 18th of September she called again. There was no perceptible increase of the growth, but spoke of a pain in the breast-bone. Amputation was recommended, the effect of which was to send her on a peripatetic wandering in the desert of therapeutics, trying electricity, pow-wow, and homœopathy. The ignis fatuus which I had lighted brought her to me again April 23, 1883.

The tumor then was of an oval shape, four inches in length, and transverse diameter. From its inner anterior surface two cornua were extending, three-quarters of an inch in length, slightly ulcerated. The skin over the tumor and for several inches around it was deeply congested, red and inflamed. The tumor rested in front on the cartilages of the ribs, but was movable. The glands of the axilla were but slightly involved.

With assistance of Drs. Hatfield, Brubaker, Walch and R. Leaman, the breast was removed under spray, August 26, 1883, and Lister's dressing for the breast applied. One nodule of hardness in the axilla was removed. At the sternal end the incision could not be approximated within two inches, owing to the necessary ablation of tissue.

April 27—Doing well, temp $99\frac{1}{2}^{\circ}$, and pulse 112 at 10 P. M.

April 28—Temp 99° , Pulse 104 at 10 A. M. The breast was dressed under spray 10 P. M., temp 99° , pulse 104.

April 29—Temp $98\frac{1}{2}^{\circ}$, pulse 96 at 10 A. M.

April 30, 10 A. M.—Temp $99\frac{1}{2}^{\circ}$, pulse 96 10 P. M.—Temp $98\frac{1}{2}^{\circ}$, pulse 92.

May 1st, 10 P. M.—Pulse 92, temp $98\frac{1}{2}^{\circ}$.

May 2, 20 A. M.—Temp 97° , pulse 84, dressed the second time, under spray, the drainage tube was removed and some of the sutures.

May 3, 4 P. M.—Pulse 80, temp 97° .

May 4, 10 A. M.—Pulse 100, temp 97° , dress under spray.

May 6—Dress under spray, sutures removed and two ligatures. 10 A. M.—Temp 98° , pulse 84.

May 7—Temp 98° , pulse 104, sitting up.

May 8—The posterior three-fourths of the incision entirely healed and healthy, the anterior fourth (4 inches in length) perfectly healthy and granulating rapidly, all sutures and their remaining ligatures removed.

May 10—The wound was dressed on and after this with iodoform, cosmoline and salicylated cotton, under which the wound rapidly healed.

Dr. Brubaker made a histological study of the growth and pronounces it carcinomatous.

As soon as the cicatrix was complete, neuralgic pains began in the left arm, right leg and body. The cicatrix remained perfectly healthy in appearance at first. The first nodule appeared in the lower part of the neck behind the left sterno-clavicular articulation. Next the left axilla and posterior and healthy part of the cicatrix began to show hardening. Now there is a chain of nodules along the whole cicatrix, one large and painful over the cartilage of the third rib, left

side above cicatrix. In the left axilla is a hard pyramid, the left hand and arm swollen. The pain, lancinating, burning, and sore is referred to left scapula, arm and axilla, occasionally shooting in course of the incision.

The apparent freedom of the axillary glands at the time of the operation, and sudden development on the healing of the cicatrix, seems to point to the idea that the original tumor was an outlet for constitutional trouble, that being taken away, there was a sudden efflorescence. It is pretty well agreed upon that a manifestation of phthisis may follow the operation for a cure of fistula. Also the observations on the change of life in women bear upon the same point.

REPORT OF EXAMINATION OF THE TUMOR BY DR. A. P. BRUBAKER.

The tumor of the mammary gland which you sent me is firm and hard, and upon section presents a white, glistening surface, from which can be scraped a small quantity of fluid matter.

Upon microscopic examination, the connective tissue stroma is seen to be abundantly developed, in its meshes are imbedded epithelial cells, some of which have undergone degeneration. In some situations the cells are arranged in a linear manner, while in others they form groups or nests.

MEDICAL PROGRESS

CASE OF TESTIS IN PERINEO, COMPLICATED WITH CONGENITAL INGUINAL HERNIA AND ACUTE ORCHITIS.—By J. Alex. Williams, M.B., M.R.C.S. Eng.

The patient, aged 2 years, was admitted on September 15, 1882, into the Royal Portsmouth Hospital, under the care of Dr. Lloyd Owen, by whose courtesy I am permitted to publish the case. The mother then gave the following account of his case. A lump had been observed in the right groin from birth. It was about the size of a small hen's egg, mobile, and often slipping into the abdomen. A medical man whom she consulted said the child was ruptured. The parents had noticed the absence of the right testicle from its proper scrotal pouch, and the child was often observed to be fretful and peevish without obvious cause. A few hours before admission the child came in from play crying, when the mother noticed an increase in the size of the lump, and thinking it had met with an injury, brought it to the hospital.

When examined, a large sausage-shaped swelling was observed in the right inguinal region, extending downward into the perinæum to within half an inch of the anus. A distinct sulcus was visible externally, separating its upper and middle thirds. The upper portion was tense, resonant, and presented the ordinary appearance of hernia. The lower was ovoid, dull, fluctuating, translucent, and evidently contained fluid. The scrotum was well formed and symmetrical, the rugæ well marked. The left testicle was normal in every respect, the right absent from the scrotum, and could not be felt. Examination of

the swelling appearing to cause much pain, chloroform was administered, and the taxis applied to the upper portion, but without success. The lower portion was now punctured, and about an ounce of straw-colored, flaky fluid was withdrawn. This, upon standing, coagulated, and was evidently of inflammatory origin. This portion of the swelling was then very much reduced in size, but did not entirely disappear. The taxis was then reapplied to the upper portion, which was now easily reduced, with distinct gurgling. The testis was then thought to be indistinctly felt in the perinæum. The child was then placed in bed, and had lead lotion applied locally. Next morning the nurse reported a re-appearance of the swelling, when, upon examination, a lump about the size of a hen's egg was observed in the right perinæum, extending posteriorly to within half an inch of the anus. It was irreducible, but mobile, and very tender upon the slightest pressure. It had the feeling and general outline of an inflamed testicle, and the cord, slightly enlarged, could be felt extending from the swelling up to the groin. The skin over the swelling was slightly reddened. The bowels were naturally opened, and there was no return of the hernia or hydrocele.

September 17th. Ice was now applied locally, and the swelling subsequently became reduced in size, and less painful.

September 30th. The child looked pallid, and appeared to have suffered much pain. The testis now felt hard, smooth, ovoid, measuring two inches in its long diameter, it had become fixed, and the tissues covering it were slightly thickened by the recent inflammation. It was less painful upon manipulation than formerly. The cord felt running up to the groin was not appreciably enlarged. The right inguinal canal was rather patent, and invagination of the skin caused considerable pain. The right scrotum remained empty, the left contained a testicle.

October 1st. The patient was discharged, the mother being told to bring it to the hospital for periodical examination, at the same time, it was suggested that the testicle ought to be excised, if the child continued in pain, or had its natural movements impeded.

January 26, 1883. The right testicle is still in perinæum, of normal shape and size, there is now only a slight perineal prominence to indicate its position. The hernia is constantly slipping up and down. The left testis is normally placed in the scrotum. The child enjoys good health. He plays much without pain or inconvenience. —*British Medical Journal*

SEA-SICKNESS By R. VACY ASH, M.B. Aber, L.R.C.P. Lond. In this paper Dr. Ash observes: "I have an idea that the sympathetic nervous system is the culprit, for the following reasons:

"1. Flushing of the face is a common sign of the approach of nausea, and we all know that irritation of that nerve will cause this, as well as an extra secretion in a gland.

"2. There is an increase in the quantity of fluid ejected from the stomach after it has lain there for a short time. In my own case I frequently noticed,

and I subsequently verified it in many others, that, if I took half a cup of beef tea, and lay in a horizontal position for a time, so as to avoid vomiting when I did again vomit, when the exhausted muscles had regained their tone and were ready for another attack, the quantity ejected was greatly in excess of that taken in. For instance, if four ounces had been drunk, about twenty ounces would be ejected, of a sour beef-tea liquid. Now, whence did the surplus come? That it was gastric juice, may, I think, be taken for granted, for, although I had not the means of chemically examining its component parts, it certainly partook outwardly of the character of that juice, inasmuch as it would dissolve meat and had an acid reaction, and it did not contain any special features that would lead to the supposition that it came from other gastric organs.

"Granting, then, that it was gastric juice, it follows that secretion, induced by the presence of the beef-tea, was in action, while the balancing power of absorption was held in abeyance. Now, if we follow this out, we shall see that the sympathetic nerve-power was acting regularly, for secretion of gastric juice is governed in the follicles by the latter, while absorption of fluids direct by the veins, which are governed by the former, is held in abeyance, or, in other words, paralyzed. I do not say that it is so, I only throw these facts out for others to corroborate, or not, as the case may be. Whence could the increase in the quantity of fluid have come? It must have been taken in some way from the blood, and what so ready to do so as the gastric follicles, stimulated into action by the presence of the small quantity of beef-tea?"

"Now, as to remedies. If my observations be correct, any drug or remedy acting on the sympathetic nervous system would cure this tiresome complaint. Ice to the spine may so act, as well as the remedies mentioned by Mr. Kendall in a more direct way. The teaspoonful of Worcester sauce, which I have found useful, may owe its efficacy to the hot condiments contained therein, and I imagine it to be possible that they act through the sympathetic in the coats of the stomach. I know that the majority of the quack remedies for sea sickness contain a mixture of nearly all the carminatives and condiments under the sun, with the hope that one out of the lot will hit, and they do hit, or rather temporarily relieve, as cayenne pepper or Worcester sauce will do. There is one mode of applying remedies that I should like to see tried by some one who would honestly take the matter in hand, and that is, the introduction of certain remedies by subcutaneous injection, for it necessarily follows that, if my idea be correct, and absorption be held in abeyance in the stomach, it is of little use to pour any medicine into that viscus when it is impossible to be taken up by the blood." —*British Medical Journal*

THE TREATMENT OF HAY FEVER —Mr. W. F. Phillips, of St. Mary Bourne, Andover, writes:

"It is just over five weeks since a lady placed herself under my care for the treatment of hay-fever, or summer catarrh—a very much better name. She had suffered severely for many years, and sometimes

from the end of May to near the end of July without intermission unless she kept indoors. Her mother, it is worthy of remark, was very sensitive to the odor of certain flowers, and was affected by some of them even to the extent of fainting. She was not subject, however, to summer catarrh.

"Knowing how exceedingly unsatisfactory is the treatment recommended and practiced for this disease, as is sufficiently evident from the recent communications to the *Journal* on the subject, I sought for rational indications that might guide me to the selection of a remedy. I thought of the neurosis that seems to underlie most cases of this kind, and to constitute the essential cause or predisposition on which the disease depends, of the characteristic symptoms of the malady, the injection of the conjunctiva, the hyperæmia and hyperæsthesia of the nasal cavities, the excessive secretion of tears and mucus, and then I bethought me of a drug whose physiological action might indicate the possession of the power to control such symptoms. Belladonna was the drug that suggested itself at once, and I determined to give it a trial, all the more hopefully because I remembered how strikingly useful on similar indications, and by a parity of reasoning, I had often found it in ordinary conjunctivitis and simple catarrh. I began with the following prescription: *R Succ belladonnæ ℥ssiv, aquam ad ℥ij Misce*. A teaspoonful to be taken every hour until relief is obtained. The medicine was taken without the production of any undesirable effect, and with very marked advantage indeed—an advantage that became still more evident and unmistakable, both to the patient and myself, when the dose was increased from one minim to one and a quarter (half a drachm in three ounces). Once, too, when the eyelids were especially tender the patient was advised to use the mixture as a lotion to the affected parts, and this local application was found to be a most useful addition to the internal administration of the remedy. Repeatedly, when the symptoms of an attack had been allowed to begin, the patient found prompt relief after a few doses of the drug, the catarrhal affection disappearing first, and then the asthmatic, and on taking it regularly every day after the malady had been subdued, she found to her delight that she can take her walks abroad through blooming grass and flowers without the least protection or precaution—a thing she had not been able to do for years before.

"The patient, remembering no doubt the failure of past treatment, pronounces the remedy "a great success," but however satisfactory the case may be, it is, as far as I know, a solitary one, and therefore stands in need of confirmation and support."—*British Medical Journal*

CASE OF COEXISTENCE OF DIPHTHERIA AND TYPHOID FEVER—Dr G. Paget, F.R.S., Regius Professor of Physic in the University of Cambridge, describes the following case,

The recent illness of the Postmaster-General may add interest to the following case. The patient was

Mrs J. K., a married woman about 28 years of age, living in Manor Street, Cambridge. Three days before her illness began, one of her children died of diphtheria, two of them having been affected. Mr. Carter, who attended them, had no doubt as to the diagnosis. The children had sore throat, and exudation upon it.

When I first saw Mrs. K. (on December 14, 1861), she had been confined to her bed about a week. From Mr. Carter I learned that her illness had begun with sore throat, and that there had been small white diphtheritic patches upon her throat. When I examined it I could find none, nor any signs of diphtheria, but upon her abdomen were some of the rose-spots characteristic of typhoid fever, and at the base of her right lung, to the extent of two or three inches, the percussion-sound was dull, and small crepitation could be heard. She was feverish, her pulse was 130, her bowels loose. She was in the seventh month of pregnancy.

For six days she continued in much the same state, as an ordinary case of typhoid fever, with moderate pneumonic complications, her bowels loose, her pulse above 120, her tongue dryish, and a general condition requiring wine and brandy. During these six days, her throat remained free from diphtheritic appearances, but on the morning of December 20th it again became sore, and in the evening the uvula and soft palate were covered with a white exudation, the adjacent parts being bright red. Her pulse then became a little less frequent, falling to 116. Chlorate of potash was now prescribed in small frequent doses, and next day tincture of perchloride of iron. On December 28th her urine contained albumen. The exudation, after its reappearance on December 20th, was seen from day to day, it had a diphtheritic character, and was very extensive. It was still present, though somewhat reduced in extent, on January 2nd. When I saw her on January 5th it had been completely cleared off.

Early in January she began to suffer much from retching and vomiting. She was troubled also with cough. The right lung was consolidated at its base, but to a small extent only. The vomiting so persisted from day to day as to bring her into great peril. On January 20th the liquor amni escaped. Active delirium now came on, and continued for upwards of twelve hours, when she suddenly aborted of a seven-months child, which lived half a day. The mother nearly died during the removal of the placenta, though scarcely any blood was lost. After labor was completed the vomiting ceased, and she gradually recovered.

The chief interest of Mrs. R.'s case is in the disappearance of the local signs of diphtheria, and their suspension for six days during the continuance of the typhoid fever, and then their re-appearance and persistence for thirteen days or more. This appears to me a fact, not perhaps contrary to what might be expected, but at least worth notice. It differs from what was reported in the case of Mr. Fawcett.—*British Medical Journal*

THE
Journal of the American Medical Association.

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THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, SEPTEMBER 29, 1883

AMERICAN ACADEMY OF MEDICINE —The annual meeting of this organization will be held at the New York Academy of Medicine, 12 West 31st street, New York, on Tuesday, October 9 (three o'clock P. M.), and Wednesday, October 10, 1883. The leading objects of this Society are the promotion of the more thorough general education of students before entering upon the study of medicine, and of a more extended and systematic course of medical studies. Only such physicians as are also literary graduates are admitted to membership in the Academy. The coming meeting will doubtless be one of interest. Any further information concerning it may be obtained by addressing the Secretary, Richard J. Dunghison, M. D., Philadelphia.

OPENING OF THE MEDICAL SCHOOLS — During this week and next, nearly all the medical colleges in this country open the annual courses of instruction for 1883-4. The Chicago Medical College, the Rush, and the College of Physicians and Surgeons, had their regular opening lectures on Tuesday evening, the 25th inst.

Good audiences were present in each college, and the prospect is good for the usual number of students in each during the college terms. At the Chicago Medical, which is the medical department of the Northwestern University, the exercises were opened by Rev. Dr. Cummings, President of the University. This school not only adheres to its strictly graded and extensive curriculum and long term, but has provided a fourth year term for such students as

choose to avail themselves of it. And we are glad to say that all the regular medical colleges in the city now require a moderate standard of preliminary education for admission to their halls.

A HINT TO THE DILATORY — Several members, who read papers in some one of the Sections of the American Medical Association at the recent meeting in Cleveland and which were referred for publication, have not yet placed such papers in the hands either of the permanent Secretary or of the editor of the JOURNAL. They will confer a favor upon themselves as well as upon the readers of the JOURNAL if they will place the papers referred to in the hands of the editor as soon as practicable. If they do not, a late publication will be the fault of no one but themselves.

SIR WILLIAM MACCORMAC — This distinguished surgeon, of London, has been spending several days in this city, much to the gratification of the local profession, and, we trust, not without genuine pleasure to himself. On Wednesday evening, the 26th inst., he accepted an invitation to meet with and address the Chicago Medical Society in one of the parlors of the Grand Pacific Hotel. At the hour appointed the room was well filled with members of the Society, and Sir William entertained them with a discussion of several important surgical topics illustrating the present status of plastic, abdominal and antiseptic surgery. The chief point he presented in relation to plastic operations was the advantage of raising the flaps intended for use in covering or restoring injured parts, dressing them properly and waiting until their nutrition had become well established (usually from twelve to fourteen days) before molding and attaching them to the parts for which they were intended. In explaining the point he related cases of rhinoplastic operations in which the flaps were taken from the arms of the patients and after the delay necessary for the complete establishment of nutrition through the pedicle, they were fitted to the nasal stump with unusually good results. In the same connection he explained an ingenious and successful mode of covering extrophy of the bladder and affording much relief from the constant dribbling of urine, by using one properly prepared flap from the integument on one side, another from above, and a third from parts below the extruded part of the bladder, making a separate operation for each flap. He did not turn the flaps in such manner as to leave the external surface or skin next to the exposed surface of the bladder, as had been generally practiced, because the hairs

would continue to grow and become the nuclei for the accumulation of calculus deposits and thereby cause much suffering to the patient. In relation to abdominal surgery, he spoke of the comparative safety of opening the peritoneal cavity under judicious antiseptic practice, for the purposes of removing intestinal obstructions, ovarian tumors, and for establishing artificial openings into the stomach through which nourishment may be introduced in cases of occlusion of the œsophagus by malignant diseases or otherwise, or into the intestines for the discharge of feces when permanent obstruction exists in the lower part of the intestinal canal. The special feature presented and illustrated by the speaker in relation to gastrotomy for the purposes named, was the advantage of making two separate operations for completing each case. The first consisted in the opening of the abdominal cavity, bringing the part of the stomach in which the opening is to be made into contact with the opening through the abdominal wall and retaining it there by sutures passed in such manner as would secure close contact of the peritoneal covering of the stomach with the peritoneum surrounding the incision for a strip at least half an inch in width. Antiseptic dressings are applied, and a delay of fourteen days during which firm adhesions take place between the surfaces held in contact by the sutures, when the opening may be carried into the stomach without the least danger of having its contents escape into the abdominal cavity. In the meantime, the patient is sustained exclusively by nutritive enemata, that the stomach may be kept at rest. After the operation is completed by the opening into the stomach, a tube is inserted and the patient easily fed through it. He related some cases in which this mode of operating had resulted very satisfactorily. In operating for strangulated hernia he advocates the entire removal of the hernial sac after the intestine had been returned in all cases where the sac is small, and the removal of a ring or strip of the sac at the upper part where it is large, which will result in a more complete closure of the opening through the abdominal wall and lessen the danger of subsequent renewal of the hernial protrusion. He also spoke favorably of resorting to the same procedure for the radical cure of bad hernias not strangulated. He unqualifiedly endorsed the Listerian method of antiseptics, saying that if only cleanliness was the desideratum, he knew of no more effectual method of securing it. In conclusion, he expressed the gratification his visit to this country had afforded him, and the cordial relations existing between the profession in this and the Mother Country. These latter sentiments were warmly re-

ciprocated by several members, and a vote of thanks was tendered to Sir William MacCormac for his very interesting address. An informal reception closed the pleasures of the evening.

SOCIETY PROCEEDINGS

MINUTES OF THE EIGHTH ANNUAL MEETING OF THE AMERICAN GYNÆCOLOGICAL SOCIETY

The eighth annual meeting of the American Gynæcological Society was held at the Hall of the College of Physicians, Thirteenth and Locust streets, Philadelphia, Tuesday, Wednesday and Thursday, Sept 18, 19 and 20, 1883.

The morning session was called to order soon after ten o'clock A. M., Gilman Kimball, M. D., of Lowell, Massachusetts, President, in the chair. The other officers of the society were Vice-Presidents Albert H. Smith, M. D., and Theophilus Parvin, M. D., LL. D., both of Philadelphia, Secretary, Frank P. Foster, M. D., of New York, Treasurer, Paul F. Munde, M. D., of New York, and the other members of the council were Drs. John Byrne, of Brooklyn, New York, Wm. T. Howard, of Baltimore, A. Reeves Jackson, of Chicago and Henry F. Campbell, of Augusta, Georgia.

The meeting was opened by an address of welcome by Dr. Duer, of Philadelphia, who spoke eloquently of the monument afforded the society by its record of the past, and of the possibilities of the future, and expressed a wish that the present sitting of the society should be like that of a united family, to whom, in the name of the Philadelphia profession, he extended a most hearty welcome.

A most interesting paper by Dr. Joseph Taber Johnson, of Washington, D. C., next followed in the regular order of proceedings, the subject of which was Superinvolution of the Uterus. After speaking of the comparatively common occurrence of the affection, to prove which a number of authorities were quoted, the importance of diagnosing this condition from atresia of the uterus, and from a uterus that had never been developed, was referred to. The author also said that he did not mean a uterus closed by inflammation, but he did mean to designate by the term a retrograde process occurring in the uterus and its appendages, and this retrograde process may obliterate the entire uterus and ovaries.

Four cases were then cited in illustration, in which treatment was attended by poor success, and a history of the want of success in the hands of Sir James Simpson, who first called attention to the disease, was referred to, for the purpose of showing that his results were not exceptional.

Dr. Fordyce Barker, of New York, opened the discussion on Dr. Johnson's paper, by referring, first, to the use of the term superinvolution of the uterus. He thought the term may be used to designate a retrograde process occurring from any cause, as, for example, fibroid tumors, or, again, some cases of acute metritis, second, as to its frequency, it is difficult to say, for the reason that most of these cases are met with in consultation practice. He sees two or three cases a year, and it is his habit to say that he cannot

afford them much benefit, and, in the third place, he bases his decision whether they can be benefited on the following rule, viz his prognosis is unfavorable when he finds an associated arrest of ovulation, or nearly so. But there are cases associated with very active ovulation, and this class of cases affords encouragement for treatment.

Dr A. Reeves Jackson, of Chicago, was surprised at the alleged frequency of superinvolution as expressed by Dr Johnson's paper. He had only seen one case, which was that of a young woman, in which the os was small, and he could detect no ovaries. He introduced a probe for the purpose of exploration, and unfortunately punctured the fundus. Not knowing, at that time, that this had been done without evil results following, the accident became a source of much solicitude, but the puncture produced no untoward consequences. She was afterward treated with a stem pessary, but with no good results. It became a question in his mind whether this was a case of superinvolution, or one of premature change of life.

Dr Van de Hallan, of Syracuse, New York, called attention to a possible cause of error that was likely to arise in the diagnosis of some cases where the superinvolution is entirely in the cervix, and not in the body of the uterus, and might be due to the surgical condition of a lacerated cervix.

Dr Battey, of Georgia, was of the opinion that superinvolution is due more to the ovaries than the uterus, and offered in proof the fact that removal of the ovaries will produce it. He thinks that electricity is the best agent for its treatment, which should be passed through the ovaries, rather than through the uterus.

Dr Byford, of Chicago, said that it was evident that a good deal of confusion exists on the subject of involution. He makes a distinction between superinvolution and atrophy, though the former may be one of the stages of the latter. He regards the condition as one of simple superinvolution, where the uterus alone is concerned, complicated, where the pelvic organs are all concerned. Much of the success of treatment depends upon our ability to diagnose these distinctions, for when the ovaries are affected, he believes it impossible to cure the disease. But when the ovaries remain natural, he believes that it can be cured. He advises a stem pessary, or some other means of producing a local congestion of the uterus by irritation. As to the frequency of superinvolution, he thinks it is not common.

Dr Campbell, of Georgia, believes it not always necessary that the ovaries should in any way be affected, or atresia of the uterus occur, to account for superinvolution. He related a case of barrenness, where there was distension of the uterus and ovulation. He was called in consultation by a prominent surgeon in regard to a case of tapping, in which he could not say whether the accumulation was in the uterus or the abdomen, which turned out, however, to be a case of twin pregnancy, one healthy, and the other dropsy of the amnion. Premature labor was brought on, and the first foetus delivered, after which the second membrane was punctured, resulting in the discharge of

several gallons of water. She recovered, but had no children afterward, though she menstruated regularly. In this case, he thinks that the over-distension of the uterus destroyed its muscular structure.

Dr Johnson closed the discussion, and said that Dr Barker had very fully covered the subject in his remarks.

The second paper was upon "The Importance of Cleanliness in Surgical Operations," by J. Stansbury Sutton, of Pittsburgh, Pennsylvania. He referred to the fact that wounds the result of accident have always been a study, and the most diverse methods of treatment have prevailed, and gave quite a history of the decadence of literature, and with its attempts to heal by first intention, and the substitution thereof of the method of healing by granulation. Quacks, at this time, were in the habit of approximating the edges of wounds, and their success attracted the attention of the regular profession, resulting in a return to the doctrine of healing by first intention. The cell theory of life resulted in the cell theory of disease. He referred to the great results achieved by the use of the microscope, of the discovery of the two forms of microorganisms, bacteria and micrococci, and the revolution in surgery by Listerism, the success of which he attributed to the method being both germicide and demanding scrupulous cleanliness. He then spoke of the universal adoption of Listerism, and of the brilliant results achieved by it. But micrococci have been detected under Lister's dressing where the wound healed as well, and micrococci will live for some time in a 5 per cent solution of carbolic acid. Whence, then, the success of Listerism? It had been attributed to carbolic acid, but Von Brun, Tait, and others had discarded the spray with even better results than before. He was of the opinion that it was the cleanliness, rather than the carbolic acid, that gave to Listerism its success. The author formulated three principles that may be applied to Listerism, as follows:

- 1st All germs are not dangerous
- 2d A 5 per cent solution of carbolic acid will not kill all germs
- 3d The antiseptic treatment of wounds, as taught by Lister, admits of modification

Bacteria swarm at the orifices of the body, but do no harm in rectal and vaginal surgery. Thinks other antiseptics better than carbolic acid, especially iodoform, which has superseded it greatly in Vienna. As long as there are germs that are noxious, he believes in excluding all germs on that account. He accords to Lister the credit of being a great benefactor to humanity, as he has taught cleanliness in surgery.

The author then went on to relate his observations among the great surgeons abroad, and the methods pursued by them, and compared their successes, giving his opinion with regard to how the various degrees of success, as represented by published statistics, were attained. He thought the spray might be dispensed with.

Dr Thomas Addis Emmet, of New York, said that he agreed with the opinions expressed by Dr Sutton in his paper most thoroughly. He had long ago said that the death warrant of many a patient has been

carried under the finger-nails of the operator. He relies more on soap and water than disinfectants.

Dr Lusk, of New York, was in favor of Listerism and the use of the spray. Though carbolic acid does not kill the micrococci, it does kill the germs of putrefaction, and greater cleanliness can be secured in the hands of surgeons at large by Listerism than without it. And in vaginal and rectal surgery, he is of the opinion that the best success can be secured if every process of cleanliness is observed. In the hands of such men as Tait, such perfect cleanliness was possible as to make the use of Listerism unnecessary, but these instances were exceptional, and success is possible with carbolic acid where the surroundings are of a nature precluding the possibility of obtaining pure air.

Dr Wilson, of Baltimore, thoroughly endorsed Dr Sutton's paper with regard to the importance of cleanliness in surgery, but thinks we owe Lister a debt of gratitude which we will be long in paying.

Dr Campbell, of Georgia, in a witty speech, said that he did not think it right to attribute all cleanliness in surgery to Lister, for a great many surgeons were cleanly before Lister was ever heard of.

Dr Sutton closed the discussion by saying that as great success had been attained without Listerism as with it, that Tait uses no carbolic acid, preferring boiling water as an antiseptic instead, and that the day of the spray in surgery has gone. He has no faith in statistics, owing to the difference in cases in the hands of various surgeons.

The session then adjourned, and a lunch was served in the room below to the members and invited guests.

AFTERNOON SESSION

The afternoon session of the American Gynecological Society was opened at three o'clock by a paper which was left over from the morning session. Dr Albert H. Smith, of Philadelphia, was the author, and the subject was, Hot Water in Secondary Hæmorrhage After Pelvic Operations. He uses it to control excessive vascular action, and also as a prophylactic against hæmorrhage and septic absorption. When applied, it is injected into the vagina and cervix uteri in large quantity, and at a temperature of 115° to 120° F., until all clots were broken up and the water comes away without stain. He wishes to call especial attention to the value of hot water in surgical operations, especially plastic operations, and its great worth in secondary hæmorrhage.

Dr Reamy, of Cincinnati, endorsed Dr Smith's opinion as to the value of hot water as a hæmostatic, and has been in the habit of employing hot water in place of sponges in certain surgical operations.

Dr Wilson, of Baltimore, thinks hot water is invaluable, and related a case of serious hæmorrhage after ovariectomy where a life was saved by it.

Dr Campbell, of Georgia, recommends the use of hot water, and spoke of the value of triiodine in arresting hæmorrhages.

Dr Mann, of Buffalo, related a case of cancer of the uterus, where hot water failed to check the hæmorrhage. He injected vinegar after the operation, and the parts appeared white and bloodless. Seeing a small piece of diseased surface, he snipped it off with

the scissors. Instantly a terrible hæmorrhage occurred, which vinegar would not stop, and hot water had no effect. He tamponed it to no purpose, the actual cautery checked it a little, but did not stop it, packing with Monsell's salt was useless, and the woman died in ten minutes.

Dr Goodell, of Philadelphia, thought that Dr Mann asked too much of the hot water, believes it to be of advantage in oozing, but it sometimes fails. It is his opinion that hot water acts beyond the tissues which it touches, and arrests by increasing the contractility of the deeper parts. He is in the habit of using vinegar as a hæmostatic, but vinegar will not do this. Vinegar acts locally. He considers hot vinegar as the best hæmostatic, as it produces both the effect of vinegar and hot water.

Dr Barker called attention to an important point with regard to the use of hot water as a hæmostatic, and that is that it sometimes takes fifteen or twenty minutes to produce its effects, and we are liable to be caught, when the loss of even an ounce of blood may be very dangerous.

Prof Byford, of Chicago, spoke in favor of hot water as a hæmostatic, and in support of Dr Smith's paper.

Dr Campbell, of Georgia, made the point that post partum hæmorrhage only requires an irritant for the purpose of making the womb contract, and a number of agents are capable of doing this, but other cases require a different kind of treatment—such as cancerous vessels, for example.

Dr Smith closed the discussion by saying that he was glad that although there seems to be some opposition to the view expressed in his paper, that even in the great experience of those who had taken part in the discussion, they all concurred in his support, and were able to give but few cases of failure.

The next paper was by Dr C. D. Palmer, of Cincinnati. His subject was, 'Some Points connected with the Subject of Dysmenorrhœa.' He spoke of the diverse opinions with regard to dysmenorrhœa, and our want of knowledge concerning its cause. The mechanical theory was described, and the remedy—dilatation of the uterine canal—referred to. He was of the opinion that the obstruction theory is true in a certain proportion of cases, and that the obstruction most frequently existed at the external os. But there is another and more important cause, in his estimation, and he believes that the far greater proportion of cases are neurotic in their character. The extreme sensitiveness of the uterus in such cases is well known. There is hyperæsthesia of the nerves, and great vascular tension at such times, and any local irritant may cause pain by exciting morbid contractions. He believes that the mechanical cause of dysmenorrhœa is rare, the neurotic frequent.

With regard to the treatment, the author recommended that it should be as a rule confined to constitutional measures in unmarried women, and advised the use of iron in the form of the dried sulphate, when the flow is of a light color. When the flow is free, too long or too frequent, arsenic was the remedy to be used. Measures should be taken to improve the general health.

Electricity was also recommended, the constant current he found best. It should be applied to the hypogastric, sacral and lumbar regions, and used in cases purely neurotic in their character.

Fenner's tincture has obtained some reputation in the treatment of dysmenorrhœa. It is a preparation of mercury and guaiac, but he has found mercury and iodide of potassium more serviceable.

Tr. cimicifuga had been employed by him with success, given in divided doses three days before the monthly period. Tr. pulsatilla was of service applied in the same way. Condemns the use of neurotics. Dilatation only contraindicated in certain cases, and proves of much value in the treatment. Thinks its virtues due to the following reasons: 1st The sensibility of the nerves is blunted by it. 2d The irritable fibers of the internal sphincter are stretched. Dilatation may be performed by graduated bougies or sounds.

The author spoke of the importance of the various stenoses, and says that it is impossible to have sterility for several years without uterine diseases resulting. Thinks incision as a therapeutic measure has been overrated, though it is to be recommended in certain cases, and thinks the results attained are better than those from dilatation.

Dr. Chadwick, of Boston, said that the paper takes very much the same ground as he does, and as he teaches, except that he prefers stretching the external os to incision. He regards the pain as from either local or constitutional cause. Local pain is due to irritation, as in fissures. But he finds very many cases due to a neurotic origin, and asserts that a local cause is unnecessary. In the treatment of neurotic cases he uses the bromides, before the menstrual period, and during the period coca and bromide of ammonium.

Dr. Barker thinks that in no cases is an accurate diagnosis more important than in dysmenorrhœa. He thinks obstruction the cause in only a certain proportion of cases. It is his opinion that the pain is due to two causes, one of which may be referred to the uterus itself, the other to the ovaries. In the treatment of dysmenorrhœa he uses lactate of iron three to five grains, associated with chlorate of potash and given three times a day ten days prior to the menstrual periods. Apol has given him great satisfaction. It should be given two days before the period is expected to occur. In cases of ovarian excitement, which is characterized by plethora, flushed face, pain in back and breasts, he employs the bromides, given three or four days or a week before the periods, taken at bed-time. Apol also proves especially valuable in these cases.

The remainder of the discussion of this valuable paper was postponed until the end of the meeting, on account of the lateness of the hour.

Adjournment of the afternoon session

SECOND DAY—WEDNESDAY, SEPT 19

The morning session was called to order at the usual time by the president, Dr. Gilman Kimball, of Lowell, Mass., who followed with the President's Address.

The subject chosen by Dr. Kimball for his address was A Biographical Sketch of Dr. Nathan Smith, Founder of the Dartmouth Medical College. He thinks that Dr. Nathan Smith has done more for the advancement of medicine and surgery in the United States than any single man in its history. He was also the second to perform a successful ovariectomy in this country, and did it without knowledge of Dr. McDowell's operation performed prior thereto.

Dr. Smith was born in 1762. In youth he was a farmer's lad, and the opportunities he had for an early education were those of a district school, and the opportunities afforded him by teaching. At twenty he was so strongly impressed by a surgical operation that he witnessed as to influence him to study medicine. Under advice, he commenced preliminary studies with this end in view. In 1787, when twenty-five years of age, he commenced the practice of medicine in Cornish, Conn., without a diploma. Finding the necessity for more education, he attended Harvard Medical School, from which he obtained the degree of M.D. in 1790. In 1797 he again abandoned the practice of his profession and went to Glasgow to study, after which he spent four months in the London hospitals. Prior thereto he had determined to found a medical school at Dartmouth, and on his return was appointed Professor of Anatomy, Chemistry, and the Theory and Practice of Medicine in that institution. In 1803 the legislature of New Hampshire voted an appropriation for that purpose, and the Medical School of New Hampshire was founded. In 1812 Yale established a medical department, and Nathan Smith was selected to organize it. He resigned from Dartmouth in 1814. In 1821 he was called upon to organize a medical department at Bowdoin College. He also lectured in the University of Vermont. But he had taken upon himself too much, and the inevitable end followed. His death occurred in January, 1829. As a physician he was fifty years ahead of his time, as a surgeon he manifested great talent and success, and as a man he was eminent for his many virtues.

Dr. S. D. Gross, of Philadelphia, in commenting on the paper said that he thought it strange that Dr. Smith was not aware of Dr. McDowell's prior ovariectomy, performed thirteen years before, which was published, and that if he had known it he would have given him due credit in his writing upon the subject. He considered Dr. Smith's greatest achievement the founding of Dr. N. R. Smith, of Baltimore.

Dr. Kimball made answer to the effect that Dr. McDowell's case was not published until nine years after the operation, and information had not the facilities for travel in those days that it has now.

The next paper was by Dr. Thaddeus A. Reamy, of Cincinnati, on the subject of "A Rare Form of Abdominal Tumor—Three Cases." The cases described were instances of sanguineous tumor of the omentum, which is of rare occurrence.

The paper was discussed by Drs. Lee, of New York, Sutton, of Pittsburgh, and Campbell, of Georgia, who all supported the author as to the rarity of tumors of this kind.

A very interesting paper on the subject of "Con-

genital Fissure of the Female Urethra, with Extrophy of the Bladder," was then presented by Dr Henry F Campbell, of Georgia, which was discussed by Dr Browne, of Baltimore, and Dr Mann, of Buffalo

Dr Edward W Jenks, of Chicago, being detained, his paper on the subject of "A New Method of Operating for Fistula in Ano," was read by title

Dr Thomas Addis Emmet, of New York, then followed with a paper of great interest, entitled "A Study of the Ætiology of Perineal Laceration, With a New Method of Its Proper Repair" He believes that a simple laceration of the perinæum does not cause the trouble usually attributed to it, and thinks the symptoms usually described must be due to some other cause Able arguments were brought forward to prove it The ordinary operation for laceration of the perinæum does not relieve the symptoms unless part of the posterior wall of the vagina is included in the operation The rupture itself occurs before the fourchette is put on the stretch, and shows how little is the use of supporting the perinæum It also demonstrates the value of Goodell's suggestion relative to supporting the head as it comes down with two fingers in the rectum He related a case where all the symptoms commonly referred to laceration of the perinæum occurred without laceration, the cause being a relaxed vaginal wall, which being sewed up, the symptoms all disappeared Dr Emmet then described his operation at length, which consists in shortening up the vaginal canal by duplicating a fold of the posterior wall upon itself A small surface is denuded at the entrance of the vagina, and another a little way up the tube, the two surfaces approximated, and joined with sutures The success of the operation is due to the part played by the deeper pelvic fascia in the support of the uterus, and the efficiency of the operation in securing this support He says that the sulci on each side of the vagina support the uterus in the same manner that his suspenders do his breeches, and if you will bring them up, then the organ will be supported He was of the opinion that there is no such a thing, in reality, as the perineal body

Dr Reamy said that he could not see why lifting up a split perinæum will secure the support Dr Emmet claims for it, and was of the opinion that, to carry out the illustration used by the author of the paper, it was like attempting to support a split pair of pants without sewing up the rent He also criticized the cavity left by folding the posterior wall upon itself, and suggested the denudation of all the tissues to prevent it Thinks the operation applicable only to a certain proportion of cases

Dr Frank P Foster, of New York, said that he wished to put himself on record even more radically than Dr Emmet, for, in his opinion, the perinæum has nothing whatever to do with the support of the organs above it Don't think there is any such thing in anatomy, as an organ resting on organs below it But it does not prove that the perinæum has no function

Dr Sutton hoped that he misunderstood Dr Emmet when he said there is no such thing as the perineal body When it is split, the transverse perineal muscles pull the labia asunder, and take away the

support of the organs above it This is the old theory, and he believes it correct Dr Sutton went into a long discussion on this and other points in the paper

Dr Emmet closed the discussion at some length, in which he stated that he does not deny the existence of a perinæum, but denies its importance as a support, and that his operation has nothing to do with the perinæum, but with reducing the size of the vagina after childbirth, when it is too large and ceases to perform its part in the support of the organs above it

Dr Charles Carroll Lee, of New York, then read a paper on "The Management of Accidental Puncture and Other Injuries of the Gravid Uterus as a Complication of Laparotomy" He quoted seven cases where the gravid uterus had been wounded during operations which afforded evidence to support his view that wounding the uterus does not necessarily produce abortion unless the fœtus or its membranes are injured

The paper was discussed by Drs Wilson, of Baltimore, Garrigues, of New York, and Byford, of Chicago The latter gentleman said that hitherto he had considered it a proper proceeding in case of injury to the uterus during operations to open and evacuate its contents, but Dr Lee's cases had proved it unnecessary He was disposed to formulate the rule that in cases of three months pregnancy it would be proper to sew up the wound in the uterus, whether the placenta was wounded or not, and in cases where pregnancy had existed seven or eight months it would be better to open the uterus and evacuate its contents

Dr Lee, in closing the discussion, said that he agreed with Dr Byford in his formulation of principles

The next paper was by Dr A Reeves Jackson, of Chicago, on the subject, "Is Extirpation of the Cancerous Uterus a Justifiable Operation?" He said that the purpose of any therapeutic measure was to save life and relieve suffering, and the justifiableness of any operation must be submitted to this test Statistics were then cited to prove the terrible mortality of the operation for the extirpation of cancerous uterus, and to show that suffering is not relieved by it Submitted to his test, he found that the operation was not justifiable

Dr Van de Walker, of Syracuse, said that he takes the same ground as Dr Jackson that the operation itself originated in the very hopelessness of the cases and that it makes but little difference how you attack it, little can be done to arrest the disease He has been more successful in cauterizing with a saturated solution of chloride of zinc getting out an entire slough of the uterus itself He protects the vagina with a pomade of vaseline and soda

Dr Emmet had opposed the operation from the beginning, and for very similar reasons as given in Dr Jackson's paper If the operation is ever to be done, it should be by the vagina

Dr Baker of Boston then described a new operation that he had adopted in such cases in which he had devised It is a modification of the operations of Sims and Scarader, and by it he has

bled to remove not only the neck, but nearly the entire internal uterus without opening either the bladder or peritonæum. After the operation with the knife, he applies red heat with the thermo-cautery. Has operated at least thirty times without a single death, and can at present call to mind six cases of at least five years' standing who are apparently well.

Dr C D Palmer, of Cincinnati, said that in his opinion, the cases can be divided into two classes—justifiable, in cases where extirpation of the cervix was sufficient to remove the diseased tissue, unjustifiable, when demanding the extirpation of the entire uterine body.

Dr Sutton had had five cases, but his results were not very satisfactory. Has recently seen Salvador and Martin operate, and they are going on with the operation. Does not think we are going about it in the right way in this country. Went on at length to give his experience with surgeons abroad.

Dr Jackson closed the discussion by saying that Dr Baker did not agree with him, for which he was sorry, but he agrees with Dr Baker, for which he is glad. Martin, he said, kills fifty per cent, and he didn't think that any one in the hearing of his voice would wish a dear friend to go through the operation.

Dr Sutton interrupted to say that if his own wife or sister should have cancer of the uterus, he would take her to Salvador to operate.

Dr Jackson advised him not to tell his wife that

THIRD DAY—THURSDAY, SEPT 20

Business meeting at 9 o'clock in the morning, with closed doors. Report of the Treasurer and Auditing Committee. Action on proposed amendments of the Constitution and By Laws. Election of officers for 1883-'84. Nominations for honorary and active fellowships by the Council. Balloting for the same. Report of the Committee on Publication. Adjournment of the business meeting at twelve o'clock.

Officers for the following year

President, Dr Albert H Smith, of Philadelphia, Vice-Presidents, Dr James R Chadwick, of Boston, and Dr Samuel C Busey, of Washington, Secretary, Dr Frank P Foster, of New York, Treasurer, Dr M D Mann, of Buffalo.

Other members of the Council. Drs T G Thomas and Fordyce Barker, of New York, Dr Thaddeus A Reamy, of Cincinnati, and Dr R Stansbury Sutton, of Pittsburgh.

The lateness of the hour prevented anything more for the morning than the reading of Dr Campbell's paper on "Menstruation After Extirpation of the Ovaries." The points of his paper were contained in the questions, "Why does menstruation occur in some cases after the ovaries are removed?" and, "May it not be attributed to cerebro spinal influence?"

The subject was ably discussed by Drs Goodell, Emmet and Garrigues of New York, T G Thomas, Byford and Mann of Buffalo. One or two instances of the existence of a third ovary were related, which would account for menstruation after an apparent extirpation of both ovaries, and the difficulty in oper-

ating of removing all of the ovarian stroma was referred to as accounting for it in some cases.

AFTERNOON SESSION AT 3 O'CLOCK

Dr William H Byford, of Chicago, read an exceedingly valuable paper entitled "Remarks on Chronic Abscess of the Pelvis." He described the different locations of the pus in pelvic abscesses, and the best methods of its evacuation, and also referred to the changes in the lining membrane of abscesses as an important point with regard to treatment. His investigations had led him to believe that the internal surface of an abscess is the same as an external ulcer and liable to similar changes.

The paper was discussed by Drs Thomas, Goodell, Sutton and Campbell, and much interesting information was elicited.

The final paper was read by Dr George J Engleman, of St Louis, entitled "Ergot, the Use and Abuse of this Dangerous Drug." He was of the opinion that ergot should never be used in treating the gravid uterus, for there are other safer and surer means that can be employed. The paper called forth a very animated discussion from Drs Johnson, Campbell, A H Smith, and Elwood Wilson, in which the most opposite views were expressed.

The time being now far spent, Dr James R Chadwick's paper, entitled "A Theory to Explain the Relaxation of the Vagina and Perinæum during Labor," was read by title. This is to be regretted, as the paper promised to be particularly interesting after that of Dr Emmet and the discussion it called forth. But the author had returned to Boston, and the time for adjournment had nearly arrived.

With the permission of Dr Campbell, the "Discussion on Death after Labor," to be opened by him, was not entered into, and the few minutes remaining were offered to Dr Palmer to close the discussion on his interesting paper on Dysmenorrhœa, read the first day. He declined, however, because of the lateness of the hour.

The new president, Dr Albert H Smith, of Philadelphia, was then introduced, and responded by a short and appropriate, but informal address, thanking the Society for the high honor conferred upon him, and expressing his hope for a successful meeting in Chicago next year.

NINTH ANNUAL CONVENTION OF THE TRI-STATE MEDICAL ASSOCIATION, HELD IN ENGLISH'S HALL, INDIANAPOLIS, SEPTEMBER 18, 19, 20, 1883

The meeting was called to order at 10 A M of the 18th, by the Chairman of the Committee on Programme, Dr J L Thompson, of Indianapolis, after which the President, Dr William Porter, of St Louis, took the chair, and Dr G W Burton, of Indiana, officiated as Secretary. After a formal address of welcome by the Governor of the State of Indiana, followed by a brief address by Dr J L Thompson and a business report from the Secretary, the Society took up its regular order of business, namely, the reading and consideration of papers. The first paper read was on "Phlebitis," by Dr H C Fairbrother,

of East St. Louis, Illinois, and was listened to with attention. Dr. Ap. Morgan Vance, of Louisville, read a paper on the "Treatment of Compound Fractures."

Dr. Vance said that it is his practice to dress compound fractures as he would simple fractures in the same location, using the fixed dressing—plaster of Paris—entirely, and trusting to the thermometer to tell if the case will go through as a simple or compound fracture. He said that he used no antiseptic dressing, as he expected the blood to seal and protect the wound better than anything else. Some absorbent substance should be used about the wound—oakum, or, what is now better, absorbent cotton. Some hæmorrhage will almost always occur when reaction is established. This purges the wound, and it heals under the scab, cotton and blood. Fever of $101\frac{1}{2}^{\circ}$ to $102\frac{1}{2}^{\circ}$ that cannot be otherwise accounted for, indicates investigation, but there should not be too much haste in opening the dressing, especially if the rise of temperature occurs within the first 48 hours. In this case, a mercurial should be given, followed by quinia. Should it occur suddenly, during the latter part of the third day and up to the fifth or sixth day, open the dressing and give good drainage to the pus. In very hot weather, when the wound is large, the use of ice-bags or ice coils will increase the chances of success. In cases where the bone has made the compound, greater success may be expected, as the opening is almost necessarily valvular. The discussion of the subject closed the morning session.

AFTERNOON SESSION, TUESDAY

A paper on "Nerve-Stretching" was read by Dr. N. J. B. Wright, of Olney, Illinois. He had taken much pains to collect reports of cases from members of the profession. The most important items in the paper, and elicited in the discussion to which it gave rise, are reported as follows:

In sciatica, nerve stretching was productive of good results. Eight cases were reported, and of these five were cured, two died of cancer. Dr. Wright operated on a laborer, aged 48 years, who had been treated by intelligent physicians with the usual methods—drugs and electricity. He was on crutches, and was first subjected to a full line of treatment, which apparently completely cured him. The trouble returned, the nerve was stretched, pus formed, the inflammation was excessive, from the time of the stretching—eleven months—to the present, the patient has been completely cured of sciatica, and is now a vigorous laboring man.

Dr. W. A. Byrd, of Quincy, Illinois, reported a case of nerve-stretching, cutting just where the nerve emerges from the sciatic notch, resulting in a perfect cure.

Dr. R. Houghton, of Indianapolis, discussed the pathology of nerve-stretching, holding that the molecular condition of the nerve-trunk was interfered with.

Dr. Myers, of Fort Wayne, held that the nature of pain is the basis from which theories of cure by nerve-stretching are developed.

Dr. Wright closed the discussion, looking upon nerve-stretching as an empirical method of cure, but

as long as it was a safe procedure for cure of sciatica, and usually successful, the profession was justified in resorting to it. He did not agree with the theories proposed in the discussion as to the cause of sciatica, and said: "The operation was productive of good in only two of fourteen acute cases. The nerves of the upper extremities were stretched in the acute cases, and of the lower extremities in the chronic. The procedure had no effect on a case of fourteen years' standing, this being the only one of eight chronic cases in which the operation was a complete failure. The result in the case of sciatica following spinal meningitis is set down as only a slight improvement. Five chronic cases cured were of sciatica. No unpleasant effects are reported as following the operation, except that performed by ourselves. This is reassuring, and takes away from the operation the phantom of danger that has caused anxious physicians to withhold the knife, allowing their patient to suffer through months and even years. It adds another justifiable recourse to the war with which we have been fighting neuralgia, especially of the sciatic nerves."

The next paper was entitled "Suggestions as to the Pathology and Treatment of Pneumonia," by Dr. E. F. Wells, of Munster, Ohio. Dr. Wells not being present the paper was read by Dr. W. A. Byrd, of Quincy. At the close of the reading it was remarked by Dr. Fields, that the paper furnished nothing new concerning either the pathology or the treatment of the disease under consideration.

Dr. W. S. Haymond, of Indianapolis, presented a well-written paper detailing the operation for removing portions of the frontal bone which had been fractured eighteen years before. The two tables of the skull were united by inflammation and the bones ulcerated nearly through to the brain. The decayed portions of the skull were removed, and the patient rapidly recovered.

Following the remarks of Dr. Haymond, a number of the members of the Association detailed their experiences in cases of some similarity, and the discussion turned upon the effects of trephining in epilepsy, which was believed would, in most cases, be productive of good results.

A paper which elicited much interest was read during the afternoon session by Dr. J. E. Link, of Terra Haute, on "The use of the Roller Bandage" as a treatment to repress abscesses and erysipelas, and especially for the dressing of stumps after amputation. Dr. Link used only several layers of old sheeting wrapped successively about the stump, which was left open for ample drainage. In 200 amputations by the doctor, commencing as an army surgeon in the late war, not a patient had died from the amputation or had suffered pain after the operation. He used no antiseptics, pus never formed in the stumps, and there was no after-pain. Dr. Link presented a young man whose arm he had amputated on Sept. 5, and who is now nearly well. He said he had suffered no pain since the operation. Other patients were presented and the doctor's method of bandaging was closely observed. The bandage, he said, is not to be removed until the wound is healed. New bandages are put on over the old ones each day as the muscles

shrink Dr Gross, of Philadelphia, speaks highly of Dr Link's method, which has proved painless, efficient and original

The discussion on this paper closed the afternoon session

EVENING SESSION—TUESDAY

Immediately after the assembling of the members in the evening the president, Dr Wm Porter, of St Louis, delivered his address which is given in full in another part of this number of the JOURNAL After the address, an interesting case of "Myelitis due to Arsenical Poisoning" was reported by Dr A W Prayton, of Indianapolis The patient was reported to have taken an ounce of arsenic, and yet recovered without any antidotal treatment, but with paralysis of the extremities and temporary impairment of the mental faculties

The next paper was on "Syphilitic Interstitial Keratitis" by Dr H M Post, of St Louis, Mo

Dr R E Houghton, of Indianapolis, read a paper on "Relative Value of Resections and Amputations" His conclusions were as follows (1) no excision should be made in aged persons, (2) no excision should be made in very young persons, (3) no excision should be made if there is even a suspicion, much less evidence of the existence of phthisis or other constitutional diseases, (4) no excision should be made in acute disease or injury, (5) excision may be made in cases where it is the hand, or foot or limb to be saved and which is of more than common value to the patient, hence the elbow and knee-joints may be excised under proper considerations, (6) the shoulder and hip-joints may be excised when it is a greater mutilation and a greater loss to lose the limb by amputation, and the patient has equally good chances for recovery of the excision as after amputation, which is rarely possible, (7) excisions are not to be made in cases of malignant diseases of the articular ends of bones or other parts of bones, (8) excisions should not be made for acute abscess in the knee-joint, and most likely not in any case of acute abscess, (9) excisions of joints generally are seven times more fatal than amputations under the same circumstances and in the same class of cases, (10) no surgeon is justifiable in subjecting his patient to excision, in view of all the facts made known, unless there are good and substantial reasons for assuming the greater risks for his patient

The reading of Dr Houghton's paper was followed by an earnest discussion, participated in by several members The Society then adjourned until the next morning

WEDNESDAY—MORNING, AFTERNOON AND EVENING SESSIONS

The proceedings opened by the reading of a paper on "The Physiology of the Brain in Relation to Insanity," by Dr N Field, of Jeffersonville, which excited a general discussion It was followed by a paper on "Insanity" by Dr Hay, of Chicago Dr N D Gaddy, of Lovette, Ind, presented a paper on "Heredity" "Some Mental Problems in Questions of Medical Jurisprudence" was the subject of a paper presented by Dr C G Comegys, of Cincinnati

At the afternoon session the special committee to which was referred the president's annual address submitted their report, recommending the change of the name of the organization from the Tri-State Medical Society to the Medical Society of the Mississippi Valley, thus taking in the entire country from Canada to the Gulf of Mexico, and from the Allegheny to the Rocky Mountains All local societies within this territory are to be considered as affiliated bodies, and shall be requested to send delegates The committee further recommended the reduction of the membership fee from \$3 to \$2, which, however, was not adopted Dr Edward Bock, of St Louis, in a paper giving "Observations on Sponge Grafting," detailed cases illustrating his method Dr Bock said that sponges for grafting must not be overlined thick, and the thin layer must not be removed until healthy skin is formed "Naso-Pharyngeal Catarrh" was the title of a paper read by Dr A B Thrasher, of Cincinnati, giving the causes of catarrh, and the different methods of treatment now in use The same treatment, however, he said, could not be applied to all persons, and each case should be made a special study Dr H H Mudd, of St Louis, presented a paper on the subject of "Stone in the Bladder," and Dr Louis D Bronze, of Evansville read a paper on "Tuberculosis, as Produced by the Inhalation of Sprayed Sputum," giving fifteen cases in illustration of the subject In the evening papers were read by Drs George Hally, of Kansas City, J W Matthew, of Louisville, Ky, and J R Mean, of St Louis

During the evening session the Society elected the following officers President—Dr B M Griffiths, Springfield, Ill Vice-Presidents—J W Matthews, Louisville, Ky, C G Comegys, Cincinnati, J E Link, Terre Haute Secretary—G W Burton, Mitchell, Ind Treasurer—F W Beard, Vincennes Chairman of the Committee of Arrangements—F L Matthews, Springfield, Ill Chairman of the Committee on Programme—Charles D Pearson, Indianapolis

The next meeting will be held at Springfield, Ill The Society adjourned to the following morning

THURSDAY—THIRD DAY—MORNING SESSION

The third morning session opened under the new name of the Medical Society of the Mississippi Valley The first paper read was on "Tait's Operation," by Dr Thomas B Harvey, of Indianapolis, and the second was on "Tait's Modification of Batty's Operation," by Dr William A Byrd, of Quincy, Ill Dr J Lutzie, of Richmond, Ind, followed with the report of a case of prolapse of the left ovary, on account of which Batty's operation was performed, resulting in the death of the patient

The morning session closed with the reading of a paper on "What is the Proper Management of a Child during the First Seventy Hours Post-Uterine Existence?" by Dr J F Hibberd, of Richmond, in which he stated that the custom of dosing infants and wrapping them in tight bandages is highly injurious So far as prudent he thought that nature should be let alone The paper was generally indorsed

AFTERNOON SESSION

The seventh session was held in the 'amusement hall of the Insane Asylum. Some fifty members were present. The hall was elegantly decorated with ferns, flags and flowers, and every effort made by the medical staff of the hospital to make the meeting a pleasant one.

Dr G V Woolen, of Indianapolis, read a paper on "The Beneficial Effects of Chloroform in Parturition," holding that it is desirable in many cases to carry the patient to full anaesthesia. This position was dissented from by several of the members, some of whom would use ether in preference to chloroform.

Dr W H Myers, of Fort Wayne, read his views on "Tracheotomy," with reports of cases under his care, and stated his belief that in cases of obstruction of the trachea, it is the duty of the physician to immediately cut open the tube and remove the foreign body. The discussion of Dr Myers' paper was deferred until the evening meeting, that members might visit the wards of the asylum. This was done by many, and the wards, containing a total of 621 men and 477 women, were found in the best condition, neat and clean, well-ordered and comfortable. Dr Fletcher explained that the women's department, which at present has beds and accommodations for but 450 patients, is at present overcrowded.

EVENING SESSION

There was a full attendance for a closing session, and the earnest work which has characterized all the meetings was continued until the set programme was finished.

After discussion of Dr Myers' paper, Dr S J Jones, of Chicago, read a paper on the "Influence of Errors of Refraction and Defects of Accommodation of the Eye," which was discussed by Drs J L Thompson, Dudley S Reynolds, of Louisville, Dr Newcomer and others, developing the dangers of indiscriminate selection of spectacles made of poor glass, and not adapted to the eyes of those using them. Only oculists should fit glasses to those needing them.

Dr Jones also read by title a "Plea for Early and More Thorough Treatment of the Ear."

Dr John Chambers, of Indianapolis, not being present, his paper on the "Treatment of Pleuritic Effusions" was referred, without reading, much to the regret of the Society. The President-elect, B M Griffith, of Springfield, Illinois, was introduced by the retiring President, Dr William Porter, of St Louis. Dr Griffith assured them of a cordial reception and ample accommodations at the Springfield meeting, to be held in September, 1884. After a vote of thanks to the officers, the fifth and most successful meeting of the Tri-State Society adjourned.

It will be seen that the Society devoted its entire time to the reading and discussion of papers and the transaction of necessary business, holding three sessions each day. It will be seen that of the fifty-three papers, the titles of which were entered upon the printed programme, twenty-eight are mentioned as read and considered during the several sessions.

DOMESTIC CORRESPONDENCE

HAMMOND, WIS., AUG 15, 1883

TO THE EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

The Northwestern Inter-State Medical Association held its first annual meeting in Hudson, St Croix Co., Wisconsin, August 7. A fair attendance was noted, several papers of merit read, and discussions of interest ensued. The annual election resulted as follows: President, Dr Chas Alexander, of Eau Claire, 1st Vice President, Otis Hoyt, Hudson, 2d Vice-President, S S Riddell, of Chippewa Falls, Secretary and Treasurer, J F Boker, of Hudson, Censor for three years, E L Boothby, Hammond.

The next meeting will be held in the city of Eau Claire, Wisconsin, on the first Tuesday in December.

This Society meets three times yearly, was organized in August, 1882, and embraces sixteen counties in Wisconsin and Minnesota. Efforts will be made this winter to incorporate it by special statute, and do away with the county societies. It bids fair to become a large and important organization.

Respectfully,

E L BOOTHBY

FALLS CITY, NEB., SEPT 23, 1883

N S DAVIS, M D

I notice that in THE JOURNAL of August 18, 1883, Dr Benj F Bache is given the credit of first using heat as a disinfectant. If my memory serves me correctly, Dr Henry, of Manchester, England, in 1824, used it to destroy the contagious property of small-pox, vaccine virus, typhus and scarlet fever, and in 1851, Dr Van Busch, of Berlin, made a trial of the same agent in a large lying-in hospital, in the wards of which puerperal fever had been very destructive, and obtained most favorable results.

Did Dr Bache's experiment occur before the above dates?

Very respectfully,

EUGENE L FRIDENBERG, PH G, M D

BOOKS RECEIVED.

Insanity By E C Spitzka Birmingham & Co New York

A Complete Handbook of Treatment By Wm Aitkens Birmingham & Co New York

A Practical Manual of the Diseases of Children By Edward Ellis, M D Birmingham & Co New York

Diagnosis and Treatment of Diseases of the Ear By O D Pomeroy Birmingham & Co New York

Hewitt's Diseases of Women Edited by H Marion Sims Birmingham & Co New York

Encyclopædic Index of Medicine and Surgery Edited by E J Birmingham Birmingham & Co New York

MISCELLANEOUS

CORRECTION—In Number six of the JOURNAL, page 190, in the discussion of the paper read by Dr E M Moore, the name of "Dr Wile, of Cortland, N Y," should have been "Dr Frederick Hyde, of New York"

THE readers of the JOURNAL are indebted to our regular Philadelphia correspondent, J V S, for the early and very full account of the proceedings of the recent meeting of the American Gynecological Society

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM SEPT 14, 1883, TO SEPT 21, 1883

Campbell John, Lieutenant Colonel and Surgeon, Medical Director Department of the South granted leave of absence for fifteen days (Par 2, S O 94, Department of the South, Sept 13, 1883)

Alexander, Charles T, Major and Surgeon on being relieved from duty at the United States Military Academy, Oct 1, 1883, to report in person to the Commanding General, Department of the Missouri, for assignment to duty (Par 7, S O 211, A G O, Sept 14, 1883)

Alexander, Charles T, Major and Surgeon granted leave of absence for four months, from Oct 1, 1883 (Par 1, S O 213, A G O, Sept 17, 1883)

Gibson, Joseph R, Major and Surgeon relieved from duty in the Department of the East, Oct 1, 1883 and to report by letter to the Commanding General, Department of the South, for assignment to duty (Par 7, S O 211, A G O Sept 14, 1883)

Horton, Samuel M, Major and Surgeon relieved from duty in the Department of the Platte, Oct 1, 1883, and to report in person to the Commanding General, Department of the Missouri for assignment to duty (Par 7, S O 211, A G O, Sept 14, 1883)

Mercham, Frank, Major and Surgeon relieved from duty in the Department of the East, Oct 1, 1883, and to report in person to the Commanding General, Department of the Platte for assignment to duty (Par 7, S O 211, A G O, Sept 14, 1883)

Smith, Andrew K, Major and Surgeon relieved from duty at Willet's Point, New York, Oct 1, 1883, and assigned to duty at U S Military Academy, West Point, New York (Par 7, S O 211, A G O, Sept 14, 1883)

Taylor, Morse K, Major and Surgeon relieved from duty in the Department of the East, Oct 1, 1883, and to report in person to the Commanding General Department of the Missouri for assignment to duty (Par 7, S O 211, A G O, Sept 14, 1883)

Wolverton, Wm D, Major and Surgeon relieved from duty in the Department of Dakota, Oct 1, 1883, and to report in person to the Commanding General Department of the East for assignment to duty (Par 7, S O 211, A G O, Sept 14, 1883)

Appel, Daniel M, Captain and Assistant Surgeon, relieved from duty in the Department of the Missouri, Oct 1, 1883, and to report in person to the

Commanding General Department of the East, for assignment to duty (Par 7 S O 211, A G O September 14, 1883)

Bartholf, John H, Captain and Assistant Surgeon station changed from Fort Lapwai, I T, to Vancouver Barracks, W T (Par 11, S O 123, Dept of the Columbia Sept 6, 1883)

Merrill, James C, Captain and Assistant Surgeon relieved from duty in the Department of Dakota, Oct 1, 1883, and to report in person to the Commanding General Department of the East, for assignment to duty (Par 7 S O 211, A G O September 14, 1883)

Mus, Louis M, Captain and Assistant Surgeon relieved from duty in the Department of the Missouri, Oct 1, 1883, and to report in person to the Commanding General Department of Dakota, for assignment to duty (Par 7 S O 211, A G O September 14, 1883)

Munn, Curtis E, Captain and Assistant Surgeon relieved from duty in the Department of the Missouri, Oct 1, 1883, and to report in person to the Commanding General Department of the East, for assignment to duty (Par 7 S O 211, A G O September 14, 1883)

Patzki, Julius H, Captain and Assistant Surgeon to be relieved from duty in the Department of the South, Oct 1, 1883, and to report in person to the Commanding General, Department of the East, for assignment to duty (Par 7 S O 211, A G O September 14, 1883)

Price, Curtis E, Captain and Assistant Surgeon relieved from duty in the Department of the East, Oct 1, 1883, and to report in person to the Commanding General Department of Dakota, for assignment to duty (Par 7 S O 211, A G O September 14, 1883)

Vickery, Richard S, Captain and Assistant Surgeon relieved from duty in the Department of the Platte, Oct 1, 1883, and to report in person to the Commanding General Department of the Columbia, for assignment to duty (Par 7, S O 211, A G O September 14, 1883)

Weisel, Daniel, Captain and Assistant Surgeon relieved from duty in the Department of the East, Oct 1, 1883, and to report in person to the Commanding General Department of the Platte, for assignment to duty (Par 7 S O 211, A G O September 14, 1883)

Appel Aaron H, 1st Lieutenant and Assistant Surgeon the leave of absence granted July 20, 1883, extended one month (Par 10 S O 211, A G O September 14, 1883)

Brewster, William B, First Lieutenant and Assistant Surgeon granted leave of absence for two months, from Oct 1, 1883, with permission to apply for an extension of four months (Par 1, S O 107, Mil Div of the Missouri, Sept 15, 1883)

Strong, Norton, First Lieutenant and Assistant Surgeon now on duty in the field near Fort Thornburgh, Utah, to accompany command to Fort Douglas, Utah, and there await further orders (Par 2, S O, 101, Department of the Platte, Sept 17, 1883)

Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY

VOL I

SATURDAY, OCTOBER 6, 1883

No 13

ORIGINAL ARTICLES

A FOR OF SPECTACLE FRAMES IN LIEU OF NOSE PIECES.

BY H. CULBERTSON, M D, ASSISTANT SURGEON U S
ARMY, RETIRED

[Read in the Section on Ophthalmology, Otology, and Laryngology.]

In the application of glasses for the relief of ametropia and presbyopia we often have need of two pair of spectacles or glasses—one for near and another for distant vision.

It is inconvenient for the wearer to apply and remove each pair in remote and proximal vision. Again, the use of bifocal glasses is attended with the constant and often annoying influence of such lenses upon the eyes, incident to the rapid variation in the accommodation. Moreover, although it may be effected, it is too expensive to be desirable. We cannot ordinarily adapt glasses for astigmatism in the

bowed temples, and which are adapted for distant vision.

The third object is to apply spectacles in front of the permanent glasses without removing the latter, and which temporary glasses shall adapt the eye for near vision, and which shall at the same time be convenient of application.

Inasmuch as astigmatism can be corrected in the glasses which are worn permanently, ordinarily the additional glasses need only be sphericals, which are inexpensive.

We present here a plan for the adaptation of such additional temporary front glasses, in spectacle form, which we regard as practical, and which are not expensive.

Figures 1, 2, and 3 will serve to illustrate these spectacles, in which "a a" represents the permanent frames, with bowed temples, to be worn next the face, and "b b" the front or temporary frames. At "c c," Fig 1, is a flat clip, which arches back over

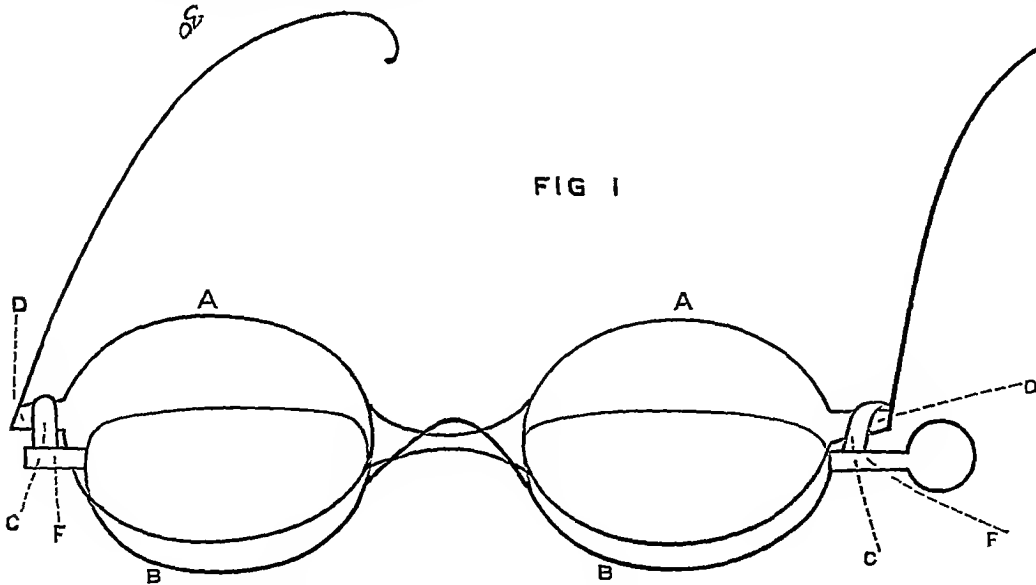


FIG I

upper and lower lenses in bifocals.

We desire, then, to adopt some plan which will avoid at least some of these defects.

The first object, then, is to obviate the unpleasant effects of nose-pieces in those who are able to wear them, and we must remember that many persons are unable to retain these upon the nose.

The second desire is to secure and wear permanently a pair of spectacles of the *usual form*, with

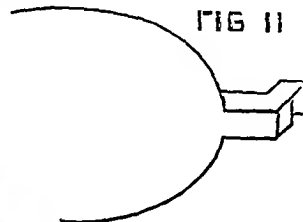


FIG II



FIG III

the end bar of the back frame, "dd," from the end bar of the front frames, to which latter these clips are securely attached. This flat clip comes down behind and somewhat below the back of each end bar of the posterior spectacles. The arrangement of this clip can be better seen in the end views, Figs 2 and 3. This clip does not fit tightly on the end bars of the back frame, which permits the front frames to be easily adjusted or removed. (A pair of these frames was exhibited to the Section.)

One or two cases may be given illustrating the use of these frames.

G W W, aged 44 years, presents with A H manifest and presbyopia. His right eye is sightless. On trial, I find in the left eye his near point is 25 cm, or 4D, and that with a + D_r 25, + D_c axis 180° its vision = $\frac{5}{8}$ in, remotum. We order this combination, for distance, in the permanent frames. At his age he has D_r 1, of presbyopia, we add a + D_r 1, for his left eye, placed in our temporary frames, and a plane glass in either frame for the right eye, and he reads S D O 5, up to 22 cm, and his range of vision extends to 33 cm, looking through the permanent and temporary glass simultaneously.

Miss S W, æt 19 years, applies for defect of distant vision—myopic astigmatism. Remote vision R and L eye = $\frac{5}{10}$, and proximal vision R and L eye = 8 to 40 cm. Without mydriatic, with — D_r 75, RV = $\frac{5}{8}$ remotum, and with — D_r 5, — D_O 25, axis 80° VL = $\frac{5}{8}$ remotum, V₂ = $\frac{5}{8}$ remotum. These are applied in the permanent or back frames, to be worn constantly for distance. We now give for the L E + D_r 5, and + D_r 75, for the R E, to be placed in the frames worn in front of the permanent glasses, thus neutralizing the concave spherics worn for distance, and leaving the astigmatism corrected in the L E, and now looking through both glasses V₂ = $\frac{5}{30}$ cm proximum. She has no difficulty in placing or removing the front frames at pleasure.

But why not permit this lady to wear the permanent glasses for wear and for work? At her age she has 10 D of accommodation, her near point per force of A = 10 cm. If the glasses for distance are worn for near-work, accommodation up to 22 cm, or 45 D, from the cornea, will not be 45 D for each eye, but in the left eye will be 45 + 15 = D 60, and in the R E will be 45 + 175 = D 625. Thus in the left eye, accommodation must be increased D 15, and in the R E, D 175, in order to see at D 45. This is casting such an additional duty upon the ciliary muscle, to overcome the hyperopia induced by proximity, as to lead to asthenopia and its evils. It must be remembered that the myopia has been corrected by the concave glasses for distance, and that the patient does not wish to be removing her distance glasses every time she desires to see near at hand. As our front glasses are half-moon shape, she need not do this, as she can see above the front or near glasses, in the distance, through the permanent glasses, and yet can remove the front frames at pleasure.

These glasses are not expensive, and are made by A Meyers & Sons, 97 William St, New York City.

SURGICAL TREATMENT OF PURULENT PLEURITIC EFFUSIONS IN CHILDHOOD

BY W H MYERS, M D, FORT WANE, IND

[Read in the Section on Diseases of Children, June, 1883]

In 1872 I was called to visit a boy aged eight years. The history of the case and the physical diagnosis disclosed the presence of fluid in the left pleural cavity. Its nature was determined by the exploratory puncture with the hypodermic needle. After thirty days I was in doubt as to the treatment pursued, and I sent the following telegram to Prof Bowditch:

"Patient æt eight years, pleuritis, followed by empyæmia, three aspirations, interim ten days. First aspiration, 36 ounces, second, 24 cmes, third, 36 ounces of pus," and in his absence received a reply from a physician of acknowledged ability to "aspirate." I followed his instruction during the remaining six weeks that my patient lived.

The result of the treatment impressed me so profoundly that I have never followed up a succession of aspirations in empyæmia, but am convinced that the aspirator ought to be used as a curative procedure in serous effusions only, and the knife in purulent effusions.

Is it true that in some cases by emptying the pleural cavity containing pus with the aspirator, that it does not refill? If it does not refill it is probable that the rapid expansion of the lung and the complete emptying of the cavity prevented the reaccumulation, or that the fluid merely presented the appearance of pus without possessing any of its distinctive characters. I do not believe in its disposal by absorption. What has been the experience of those members of the profession inclined to adopt aspiration as a curative measure, and under what circumstances have they effected cures by this measure?

My reasons for advocating the use of the knife exclusively after the first aspiration are—

- 1 That the cavity refills after the use of the aspirator in purulent effusions
- 2 That the repetition of the needle punctures is painful, and fraught with shock and terror to the young subject
- 3 That much valuable time is lost, tentatively allowing the lung to be bound down by firm adhesions, allowing them to become fibrous and toughened, thereby preventing the complete re-expansion of the lung by atmospheric pressure after the use of the knife, leading ultimately to the contraction of the side corresponding with the effusion
- 4 That speedy relief of the lung promotes its complete re-expansion, and that this can only be accomplished by the knife, and seldom, if ever, by the use of the aspirator
- 5 That the question of the admission of air into the pleural cavity in these cases is virtually settled, and has ceased to be an important factor in the treatment

After the permanent opening is made with the knife or trocar in the seventh or eighth intercostal-space in the posterior axillary line we can insert a Jacques or

India-rubber drainage tube through the canula or in the wound made by the knife, and allow it to remain, the external end to be covered with a thick layer of oakum as an absorbent. One opening is sufficient.

In young children, who are terrified at irrigation, I believe that immersing them in a warm bath containing Condie's disinfecting fluid by far the best to wash out the cavity.

GASTRO-ELYTROTOMY

The following comments should have followed those of Dr Dandridge as a part of the discussion of of Dr Taylor's paper on Gastro-Elytrotomy, in the the number of the JOURNAL for August 18, 1883, but were accidentally overlooked. ED

Dr W H Wathen, of Louisville, regarded Dr Taylor's gastro-elytrotomy as another illustration of the perniciousness of delay in abdominal section for removal of a child. The operation, as is too often the case, was performed only as a *desperat resort*, when the woman was so prostrated from protracted labor and by the effort to perform craniotomy, that success could not have been expected. Valuable time was probably lost in the ineffective attempt to perform craniotomy, though the child was dead, and the pelvis nearly three inches in its several diameters. Parry has shown that in craniotomy in pelvis of two and a half inches or less, in the conjugate diameter, the mortality is 50 per cent, while it is only 25 per cent in the timely Cæsarean operations in the United States. With 75 per cent of recoveries in cases of election in Cæsarean section when abdominal surgery was in its infancy, we may expect the future to show us success in similar cases of 90 per cent. In 119 secondary operations on 48 women there were only 8 deaths—a mortality of about 6.83 per cent. This success may have been partly due to a greater tolerance for the operation in these women, but it was mainly due to the fact that the secondary operations were performed early and with care, as a complication demanding the operation was known to exist. Porro's operation, or Miller's modification, has been performed about 110 times with a success of 56 per cent. These results in Europe, and especially in European hospitals, are encouraging compared with the Cæsarean section. In European hospitals nearly every case of Cæsarean was fatal, while Porro's and Miller's operations have saved 40 per cent. These operations and gastro-elytrotomy may be often successfully substituted in Europe for the Cæsarean section, but no such change is indicated in our country. These operations can never be generally adopted, and must be mainly confined to large cities and hospital practice, in the hands of experienced operators with good assistants. The Cæsarean section is much more easily done, and has been performed with no assistant. Though the uterine incision should always be sutured, this is not more difficult than suturing the abdominal wound.

In conclusion, I wish to inveigh against the reckless sacrifice of human life in craniotomy—as much from a scientific as from a moral view, and to urge

upon the profession the great importance of timely abdominal section as a substitute that would be followed by equally good results to the mother, and spare us the shame of murdering a helpless child.

ARTICLE ON DENTITION

BY DR A H GOOD, SELMA, IND

Read in the Section on Diseases of Children June 1883

MR PRESIDENT, AND GENTLEMEN OF THE AMERICAN MEDICAL ASSOCIATION. The process of dentition is not properly classed as a disease, but the diseases which accompany it are numerous, hence I have given my paper the nomenclature Dentition. In order to be brief, I will not refer to statistics. In dentition, with its accompanying diseases, the mortality is generally greater than in all other diseases to which children are subjected. Some children are more easily disturbed by teething than others, because of not being so strongly organized, or because of some peculiar susceptibility to its influence. I conceive it to be true that the process of dentition acts more severely (although a natural one) than would foreign bodies similarly located. At the extremity of each tooth-root is the dental foramen through which the dental nerve passes, and during the growth of the tooth there is an inflammatory action, which, coming through the nerve agency, reflects with great power through the same channel, and is generally distributed through the sympathetic nerves. We then have, in addition to the tooth acting as a foreign body, a reflex nervous irritability. Our attention is first called to the teeth, and when the gums are swollen they should be divided, to relieve pressure, pain, and inflammatory action.

When aphthous ulceration occurs, it should be treated with a solution of persulphate of iron, or some other astringent lotion.

We have, as a concomitant, a functional derangement of the stomach and bowels, resulting from innervation, the sequel of the reflex nervous irritation, and displaying a yeasty and soured condition. This we may find, upon microscopic investigation, to contain myriads of bacteria. Can we not, then, trace the origin of bacteria, if found in the stomach and bowels of these patients, to be the result of malnutrition and the cause of cholera infantum? The treatment for this condition varies according to the mildness or severity of each individual case and the surrounding circumstances (*viz* foul or pure air, squalid or comfortable apartments, and a strict observance of the laws of hygiene). But when the disease is established, and the removal impracticable or impossible, then comes the severe trial to the physician, anxious parents and suffering child. A high rate of mortality, every act of the physician closely watched, even his changes of countenance from anxiety to forlorn hope closely scrutinized, and so "ad infinitum." The thermal ranges are various in different and even in the same cases, in the acute form often reaching 103, 104, or 105 degrees Fahrenheit, in the more progressive form usually much lower. The pulse generally corresponds to the temperature.

Viewing the disease from my standpoint, I begin the treatment for the disease proper with nervines, and as a normal temperature (or a somewhat elevated temperature, is a favorable condition for micro organisms and inflammation), I use cold compresses to the bowels and ice water injections, and for the secondary symptoms I use pepsine, sub nit of bismuth, and carbolic acid

DISCUSSION ON DR GOOD'S PAPER

Dr Woodworth, of Illinois, said that in a practice of thirty-three years he had always been in the habit of lancing the swollen gums of teething children, with good results. Beside giving relief, he thought the teeth came on more readily with scarification of the gums than without.

Drs Earle, of Chicago, and Boothby, of Wisconsin, testified to the relief given in the reflex diarrhoea of teething children by scarifying the gums, medicine being entirely withheld, but particular attention paid to diet. Dr Boothby never scarified only for a diarrhoea, believing that to be the only indication.

COMMON DISEASES OF CHILDREN.

BY R L MOORE, M D, SPRING VALLEY, MINN

[Prepared for the Section on Diseases of Children]

One cannot treat children for any length of time without being impressed by the fact that the diseases that exclusively belong to them are few. There will appear a certain unity of signs and symptoms in each case. The ordinary critical observer will soon learn to generalize these into two classes. If he has eyes to see and ears to hear and hears, he will perceive that in almost every case of sickness in children there is some trouble with either the breathing or digestive apparatus. And if he exercises his faculties he may soon learn to read the signals which nature hangs out to inform him as to which set are in trouble. Now he should not lose his balance, and imagine that an inflammation exists in one or the other set of organs. More often in the large majority of cases it is simply a condition of irritation. And because of this, let him not rush to the other extreme, and think that the child is not seriously ill. No. Let him remember that "a sick child is always dangerously sick."

This "irritation" may cause other and distant organs to be violently perturbed, through sympathy. Be not deceived by these manifestations, nor admit that you "wish the child was old enough to tell what is the matter." The whole story is before you. Read it.

What shall you name the disease? Yes, you must have a name to give in reply to the first question, "What is the matter?" One of several will do. Catarrhal fever, ephemeral fever, irritative fever, simple fever, worm fever, gastric fever, infantile remittent fever. Either of these names, I venture to say, will well enough describe the greater number of

cases of sickness in children, outside of some specific epidemic diseases. What are you going to do about it? Treat it. And right here I beg of you, do not perpetrate the swindle of writing a prescription (in poor Latin, perhaps) for maybe a four ounce mixture of medicine, in which there shall be probably some opiate, bromides, tinctures and syrup. A teaspoonful, more or less, every two to four hours. Do it and the chances are that your little patient will be worse next day. Exercise a little common sense. Have your own simple remedies with you. Put drops, four, six, eight or ten, of specific or German tincture of aconite and belladonna into a tumbler, goblet or teacup and add twenty-five teaspoonfuls of water. Give a teaspoonful every half an hour or hour. And give plenty of water to drink, with cool sponging off, if the fever runs high, and plenty of good air to breathe. The chances are as fifty to one that the little sufferer will be better and comfortable in twenty-four hours. I would add that sometimes verat viride should take the place of the belladonna. And again, a few small doses of calomel and santaline well rubbed down with sugar may be very necessary.

The only objection which some so-called "medical men" can offer to this method of treating the "common diseases of children," is "that the little ones get well too soon."

Our profession ought not to rest easy under the odium often repeated by the laity, "that it is so difficult to treat a sick child, because they are too young to tell what is the matter." Children are more desirable patients than adults. They respond more readily to remedies.

This is a fact that all will admit. They are free from the worry and friction of the little cares of life, which depress so many adult patients. They have no fear of death. This is another great factor in their favor. Did you ever know of a child dying from chloroform?

No. I venture the assertion that the large majority of the deaths from chloroform are from fright. The patient has heard that it is dangerous. There is some ominous look, an examination of the heart and lungs, an array of restoratives of various kinds, and a general expectation that some untoward event will happen. When the patient begins to feel the queer sensation produced by it, and with those last impressions so fixed in the chloroformed brain, he, or she, is alarmed, faints, the heart stops for a moment, it cannot start again, and all is over! The child has none of these things to contend with.

One of the watchwords in treating children is ELIMINATION. Don't lock up the secretions. Give Nature, that grand old mother, a chance. Very rarely should opium, nor any of its preparations or derivatives, be used in the treatment of children. He who abides the nearest to this rule will always have the best success in treating them. Look after them closely. Stand by the small and frequently repeated dose of tasteless medicines. Never forget that a sick child is always dangerously sick.

THE DUTY OF THE HOUR

BY HENRY LEFFMANN, M D

[Read before the Philadelphia County Medical Society Sept 26, 1883]

In his work on the descent of man, Mr Charles Darwin, of blessed memory, remarks that he made in the course of his studies a large collection of the definitions which have been offered as expressing the distinctions between man and the lower animals. The primary object of this collection was to show the insufficiency of such definitions, but unfortunately the learned author abandoned his plan and the list was never published. I have always regretted this because I was anxious to see if anyone has been bold enough to sacrifice the honor of the race to its independence, in other words, to define the human being as the only animal in which natural passions are abused and unnatural appetites developed. Though it may be a pessimistic view of human nature, yet we cannot avoid the conclusion that the definition is substantially correct. The history of races and nations presents us invariably with a picture of unbridled passions, the fierceness of which is but slowly and uncertainly assuaged by civilization, for in the modern as well as in the ancient world, it is in the centers of intellectual development that the greatest license has been seen. Legislators both of the civil and ecclesiastical order have wrestled with these moral problems and with some forms of excess, have tried every expedient from the most despotic repression to the most indulgent remonstrance, but with only partial advantage.

Among the vices which appear to be characteristic of man under every climate and social condition is the use of alcoholic liquors, and although the evils of this indulgence have been vividly presented to every one, yet a determined effort to obliterate the habit belongs only to our own time. In that almost exhaustive treatise on moral and religious polity, the Jewish and Christian scriptures, we notice that the duty of total abstinence has not been inculcated either among the Hebrews, although the daily duties of life were regulated with microscopic minuteness, nor among the leaders of the new dispensation, although they founded a most extended system of asceticism and self denial.

We are concerned, however, with the present not with the past. Around us is a social system of great complexity. Though progress is slow, yet we need have no fear of its general direction. Each year marks too slight a movement to permit us to distinguish the result, but each century gives us a definitely recognizable advance, and shows clearly the tendency of the race to a higher and purer life. It is the text of my discourse to-night, that the basis of this higher morality is self restraint, and the basis of self-restraint is the influence of example.

In consideration of total abstinence and the relation of the medical profession to its encouragement we must clearly distinguish between the use of alcohol as a beverage and as a medicine. With the question of its therapeutic indications and contra-indications we have absolutely nothing to do in this paper.

As to the method and form of its clinical use, however, as will be shown later, very important questions arise.

I think I may safely assume that the use of alcohol is not necessary to the maintenance of ordinary health. Its physiological effects have been extensively studied and concordant results have not always been attained. I need not stop to reconcile their differences, for the greater portion of the published results is not germane to my subject, nor will it be necessary to devote time to the presentation of statistics.

One authority will be sufficient, because it is an authority in whom opportunities of observation and experiment are combined with sound common sense and accurate logic. Without desiring to slight the labors of other workers, I think we may find in Parkes' Hygiene the whole subject of alcohol so thoroughly discussed as to render other authority superfluous. In this work it is established beyond question that the use of alcohol is not beneficial, that it does not increase the power of the system to resist extremes of heat, cold, or fatigue, and that even in special cases in which stimulants appear to be needed to maintain the resisting powers, other substances may advantageously be used. It is certainly surprising to read that one of the most common opinions, I would rather say superstitions, about alcohol, that it assists the body in resisting cold, is without foundation. Scarcely any of the minor causes of drinking are more general than this, yet the unanimous testimony of those who have been in charge of polar expeditions is against its beneficial action in such vicissitudes, and some of these leaders have, after their first experiences, declared that they would not take on any subsequent voyage any person addicted to the use of stimulants. As regards the general effect of the continued use of alcohol on persons in ordinary health, I cannot do better than quote briefly from papers read by well known clinicians before this Society two years ago. Dr Wood says: "Although I hold that the habitual use of alcohol is to well-fed persons not only unnecessary, but positively baneful, it seems to me that in many cases of disease, and in those periods of life when by reason of age the body waxes weak, alcohol is possessed of great value. Under sixty years of age the daily employment of wine may for most persons be very well discountenanced." * * * It is notorious that in America almost every one in reasonable health consumes much more food than the system needs, so that any alcohol taken is added to that which is already in excess." Dr Pepper holds that the quantity permissible is very small, not more than one and a half ounces of absolute alcohol in twenty-four hours, taken much diluted, and only at meals. A very large number of persons, either from susceptible stomach or a gouty diathesis, cannot safely take alcohol at all. Dr Bartholow says: "as a stomachic tonic 'alcohol is

¹ 'Is Alcohol a Food?' Proceedings Phil Co Med Soc. Vol III
p 135
Effects of the Prolonged Use of Alc
and Organs of Special Sense. *Of cit* p
² Alcohol its Therapeutical Uses
cit, p 127

effective only in the case of those not habituated to its use. That in time a catarrhal state of the mucous membrane is produced, and a pathological secretion obtained shows the impropriety of the long-continued use of alcohol as a stomachic tonic." Finally, although relating to the therapeutic use of alcohol, I cannot avoid quoting some forcible and logical remarks made by Dr Woodbury⁴ in a discussion on the treatment of pulmonary consumption. "Nothing in clinical medicine is more certain than that the continued use of alcohol in even moderate doses stimulates the development of connective tissue all over the body, nothing in pathology is more evident than the fact that alcohol is a prolific cause of pulmonary disease, nothing in toxicology better established than the observation of the action exerted by alcohol upon the respiratory center. For this reason it is especially dangerous in pulmonary consumption."

It is unfortunately too true that no quotations from authority nor rehearsal of statistics are needed to show the moral and physical injury done by alcohol. Directly and indirectly it is a prime factor in the promotion of disease and crime, and when we reflect upon the thousands of desolate homes and ruined prospects for which this agent is annually responsible, we can not wonder at the sentiment which is slowly but surely developing in the community against all phases of industry or trade which have for their object the furtherance of the use of alcohol, nor can we doubt that to the success of the work of moral regeneration of our race, the obliteration of these industries is essential.

A powerful assistance in securing and maintaining sobriety would be to destroy the superstitious respect in which the various beverages are held. Now, medical persons are generally aware that physicians attribute particular value to particular liquors. In my own experience I have found very few persons who are willing to admit that they use liquor merely because they like it. They generally find some other reason—the necessities of the system, the advice of some physician either to themselves or to some friend. One person uses beer because it is a tonic, another because of its nutritious value, and so on, every reason but the real one, because they like it. Not a little of this popularity of liquor is due to the glamour of sentiment which attaches to it even the austere psalmist who, with the exception of a simple sin, "did that which is right in the sight of the Lord" has praised the "wine that maketh glad the heart of man," and for ages poets and prose writers have extolled the qualities of stimulating beverages and the romance of their manufacture. In our time, however, these sentimental features are but imaginary. Nothing in the present methods of producing liquors is of a character to make us respect them as types of poetic or convivial relations. The wine that stands on our tables no longer shows in its ruddy color its rainbow tints.

"Caught when the morning sunbeams stooping low,
Have kissed Grenadas' plain
Nor does its aroma repeat

The dainty perfume of the East
That Horace used to praise"

No, the suggestions that are now called up by those who know the facts are the suggestions of the fourth floor of a Front street warehouse, where rectified spirit, animal charcoal, glycerine, sapoinfeed cottonseed oil, aniline red, burnt sugar *et hoc genus omne* are being mixed together and transferred to casks and bottles ornamented by lying labels. The foaming tankard of malt liquor no longer suggests the

"House where nut brown draughts inspire,"

but the images now appropriate are those of bloated workmen, aloes, quassia and other hop substitutes, salicylic and boric acid, baking soda, gum for preserving froth and beer pumps for producing it. In short, no romance belongs to our alcoholic beverages. They are the products of influences allied with the lowest levels of mercantile honor, and their touch is corrupting.

In an article read before this Society two years ago¹ I put forward the view that when alcohol is to be used by physicians it should be used as such, and not in the form of special manufactures. I cannot express myself better than by my words on that occasion, as follows:

"We know that liquors prepared by strictly natural methods are not constant in composition, we know that under the exigencies of trade additional conditions of variation are produced, and even complete substitution brought about. I have for some time thought that the best way to secure entire constancy in the therapeutic use of alcohol would be to have the preparations made up by regular prescription or printed formula in the pharmacopœia. The substances which exist in wine, beer or brandy are in accidental mixture—some are useful, others are useless. Why should we not have the useful articles properly combined by competent hands, and the useless omitted, and the physician, instead of ordering a special wine, will simply prescribe such proportions as may be necessary of alcohol, water, flavoring others and astringent or bitter principles."

These prescriptions, like others containing powerful ingredients, should be renewable only at the instance of the physician.

I have lately learned with much pleasure that Dr A. W. Muller, of this city, a gentleman well known to most members of the Society as an experienced pharmacist, is about to publish a paper advocating a similar view. Dr Muller indeed, expressed such opinion publicly several years ago, although I was not aware of it then. His large experience in the manufacture of flavoring, coloring and other materials used in liquor imitation, gives him the right to speak with authority, and I find by my conversation with him that we are entirely in accord. In his paper he intends to call attention to the fact—which I would not have time to consider—that in wines and brandies practitioners' articles are sold at high prices,

¹Medical Relations of the Commercial Adulteration of Wines and Liquors—Proceedings Phila. Co. Med. Society Vol III p 132

and thus the practice of ordering such articles exposes patient to both deception and robbery

Not the least of the injuries which is done to the community by the laxity of physicians in reference to the use of liquors is the encouragement which is thus given to the sale of quack medicines under the guise of bitters and tonics. No greater fraud is put upon the public than the preparations which are advertised under these names. They are alcoholic beverages in their most dangerous and insidious form. I have this week examined one of the most extensively advertised of the lot—Warner's Safe Tonic—and I find it to contain about 10 per cent of alcohol in association with some vile combination of syrup and bitter extract. When it is remembered that the miserable stuff is bought at a price much above its value, and is used mostly by persons already somewhat out of health, we must see that the harm done is incalculable. Yet the popularity of these articles is largely due to the fact that they meet what most people believe to be a necessity in dietetics—an alcoholic tonic. During the last few years several eminent physicians and chemists in this country and abroad have gone almost in spasms over a knowledge of such adulterations as the use of alum in baking powders, glucose in candy, and oleomargarine in butter—all trifling and non-injurious substitutions, but we have very little about the far more damaging preparations of the class just alluded to. The most striking evidence of the profoundly misguided condition of the public mind on these topics was well shown lately in New York, when the officers of the Business Men's Moderation Society gravely condemned the use of the harmless glucose in beer, and then gave inferentially at least certificates of wholesomeness to beer containing between 4 and 5 per cent of alcohol! The quack medicine mentioned above has with each bottle the official certificate of the Professor of Chemistry of the University of Rochester, stating that the preparation is free from deleterious ingredients. I feel sure that statement like this could not be made if medical authorities were true to their own knowledge on these questions.

It is in view of the points which I have here enumerated that I feel obliged to lay before this society and through its published proceedings before the world the accusation that the medical profession is responsible for a very large portion of the misery which alcohol beverages produce, and I declare that the time has now come when a stand should be taken in favor of abstinence. I believe that it is established by the citations I have given that alcohol is not needed by healthy persons. I know that many non-medical persons use liquor because of the general approval of it by the medical profession, and I think it can be demonstrated that although alcohol itself is a substance of great value, alcoholic beverages are entirely unnecessary. Of late years, although physicians have assumed the right to speak boldly upon many questions effective of public health and public morals, they have been regularly conservative as regard the evil of moderate drinking. Yet it seems to me that sewer construction, registry laws, quinine pills, river pollution, ethics, innova-

tions, etc., on which topics so much energy has been expended recently, do not approach in magnitude the reform which is here urged. The pollution of a river water by organic matter before it reaches a city reservoir is rarely so serious in its effects as the pollution of it by alcohol after it leaves the hydrants, and the dangers of Rye Beach of which we have heard so much are trifling compared with the dangers of rye whiskey or what is labeled such.

The learned professions are potent influence in moral reform, and for many centuries law and divinity have exercised much more control over the race than has medical authority. This relation is now rapidly changing. The questions of civilization are regarded as practical problems largely medical in character, and the direction of education is passing into the control of the scientist and physician. Both the lawyer and the divine have recognized alcohol as a foe to public and private virtue, our courts now frequently regard intoxication as an aggravation rather than an excuse for crime, and the almost unanimous temper of church men is against any form of indulgence in stimulants, even the time-honored employment of wine in communion is not sufficient to maintain its use, and unfermented wine is now a familiar article of commerce. Let us then begin at once to discharge our duties, and ally ourselves openly with ——— of the laity, who, though lacking in scientific knowledge, have the good of the community at heart. Let us recognize that while many evils claim our attention, the importance of a firm stand in favor of total abstinence is urgent and in indeed the "duty of the hour."

TINNITUS AURIUM AND THE DEAFNESS WHICH ACCOMPANIES BRIGHT'S DISEASE

By LAURENCE TURNBULL M. D. AURAL SURGEON TO THE JEFFERSON MEDICAL COLLEGE HOSPITAL

[Read in Section on Ophthalmology, Otology and Laryngology.]

Within the last two years my attention has been called in hospital and private practice to several cases of Bright's Disease of the Kidneys in which there was disturbance of the hearing, and the following is a report of a few of them.

Case 1. Acute Interstitial nephritis.—E. F., aged 18, a lad of delicate organization, was attacked with nephritis while exposing himself after bathing in the sea at Atlantic City. He had a chill, followed by pain in the region of the kidneys, and he was not promptly treated, and no examination of his urine was made for several weeks, while he was under the care of two physicians prior to his visiting me. When he presented himself he had slight œdema of the face and extremities. There was no dimness of vision, but loss of hearing, with a recent muco purulent discharge from left ear. There was some oppression in the breathing and irregularity in the heart's action. For weeks, at intervals, he had gastric disturbance with vomiting, which was always followed by an increase of the symptoms.

Having a cough I examined his lungs and found râles at the base of the left. The heart was slightly

enlarged but did not present the galloping sound so frequently found in Bright's Disease

Examination of the urine gave the following results Color yellow, reaction acid (sp gravity 1015), uric acid abundant, albumen three-fourths after boiling and testing with nitric acid, microscopic examination some epithelium casts and fatty scales

On examination of the left ear found recent perforation of membrana-tympani, with granulations and the meatus was bathed in muco-pus R M T thickened and sunken, with more or less buzzing tinnitus in the R His eustachian tubes were open

By careful diet, warm bath and internal treatment chiefly, by Infus Digitalis Comp the albumen has almost disappeared, and under milk diet the young lad is able to resume his duties as a clerk, with occasional slight increase of albumen on exposure or irregularity of diet

The left ear was treated by cleansing with absorbent cotton and the application of powdered boracic acid, so that the discharge is almost nil and hearing much improved

Case II Acute Parenchymatous Nephritis—Pain in the ear and temporary deafness—Miss E B W, aged 24, was suffering May, '82, with slight fever, malaise and debility, with loss of appetite, also slight oedema of the face, for which she was sent to the sea shore, Atlantic City On her return was attacked with tinnitus aurium in the right ear, for which she was sent to see me, in August, 1882 On inquiring it was stated that she had brought on the attack of oedema, etc, by painting in oils with the free use of turpentine Feeling somewhat alarmed, owing to the death of a brother with chronic Bright's disease, the urine was examined but nothing abnormal was found at that time There existed, however, the defective hearing and noises The ear was examined and there was found hyperæmia of the membrana-tympani, with obstruction of the Eustachian tubes and persistent tinnitus These symptoms were treated by inflation with the vapor of chloroform in Politzer's air bag, counter irritation over the mastoid with tincture of iodine She was placed upon a tonic of beef, wine and iron, and was much improved After marriage she removed into the interior of Pennsylvania, and I did not hear of her until she became pregnant, when I was informed that with this she had a severe attack of dyspnoea, and oedema, which had invaded the whole left side of the body, and that her physician had pronounced that she had a form of Bright's Disease Soon after this she became much worse and returned to the city and was placed under my care A large amount of albumen was found in her urine with epithelium casts and fatty deposit She was from January, 1883, under active diuretic treatment, and soon was delivered of a foetus of three months, by the breech, with a slight hæmorrhage This was followed by a great amelioration in all the symptoms for a time She had a slight relapse in March, and on the 19th examination of the urine was made, one-fourth albumen when treated by boiling and nitric acid The fluid, under the microscope, showed a

large quantity of blood and renal debris This, no doubt, was the hæmorrhagic stage of the disease To diminish the hæmorrhagic tendency she was placed upon the Mist Ferri Comp (Bashane), which she took with decided benefit, but it had to be omitted, owing to the pain in the head and active congestion of the base of the lung with cough This was treated with tincture of iodine as a local application, and an emulsion of cod liver oil with wild cherry

March 24th Again a return of severe pain in the ear with congestion of membrana-tympani and noises They were relieved by Politzer and free use, by the nostrils, of chloroform, which was also forced into the middle ear She was then kept in bed and on a more rigid diet of skimmed milk every two hours with toasted bread, mutton chop with boiled onions, no acids or sweets of any kind The fluid extract of jaborandi was then employed, commencing with ten drops three times a day, and gradually increasing to twenty-five This kept the skin moist by its action on the cutaneous secretions She complained of her imperfect vision, and on examination of the eyes by the ophthalmoscope I discovered a well-marked albumenuric retinitis with extra deposit of blood spots on the retina She had at times great difficulty in determining the faces of the family, there being a mesh before her eyes

11th All the symptoms favorable, has taken no medicine except the jaborandi and most careful diet

April 18 Examining the urine this day and for three days since, I found no albumen or casts, patient able to see better, spots of blood disappeared Case still under treatment May, 1883, no albumen, and is able to be out of bed and has been out to walk, hair all dried up and had to be shaved, had a relapse in June, 1883, and had to keep her bed for most of the month, improved again in July, was taken to the country, had to be in bed most of the time as the weather was cool and damp, better again and is almost able to return to her home in the city, and has continued better up to Sept, 1883, still, however, employing an extract of jaborandi

CASE III—This case occurred at Jefferson Medical College Hospital Ear Clinic E G, a young lad aged 15 presented himself in the last stages of Bright's disease in which there was every evidence of fatty degeneration of the kidneys, and the same condition of the auditory nerve and retina, with profound deafness He had the noises in the early stages of the disease

CASE IV—W V aged 45, workman, has marasmus with polyuria, dyspnoea, amblyopia and epistaxis, with almost complete deafness without the tinnitus aurium There was a transudation of serous fluid from the ear, but no perforation of the membrana tympani, and with but little change in normal appearance of the same He had constant and persistent noises for which he had been under treatment for months before he presented himself at our clinic

CASE V—Acute parenchymatous nephritis W H W, aged 35, had been under treatment by a physician of this city for rheumatism and congestion

of the liver when I was called in consultation as he had an affection of the ear. Otitis media purulent, with tinnitus aurium, which had preceded the other diseases. He also informed me that he had suffered from dyspnoea for months on going up stairs. This I found was from hypertrophy of the heart, but he had never had oedema of the face and extremities until I discovered a slight puffiness around the eyelids when visiting another member of the family. The young man had never experienced any difficulty in passing his urine, and the following was the examination of the urine.

April 15—Light color and muddy aspect, sp gr, 1010, albumen, one-fourth coag with nitric acid, excess of uric acid with epithelium and some hyaline casts.

Diagnosis—Acute desq. nephritis with uric acid diathesis.

He was kept in his room, but would not go to bed or be careful of his diet, treated by means of various agents—diuretics, diaphoretics, tonic and mineral waters, but no improvement took place in his condition, but he gradually became worse. Another examination was made of the urine on April 18. The microscopical examination of the specimen of urine gave the following results:

Numerous crystals of oxalate of lime.

Multitudes of cells from the uriniferous tubules of a granular nature, containing from one to three nuclei each.

A few blood and pus corpuscles.

Many fine granular and epithelial, and a few hyaline casts.

Soon after this last examination violent headache and vomiting came on, followed by uremic convulsions and death. A post-mortem was made, and there was found the large pale and fatty kidney, with acute hæmorrhagic congestion of the brain. The literature on the subject of disease of the ear in connection with Bright's disease of the kidney is very meager, and especially is this so in ordinary works on diseases of the ear. We have one valuable case reported by Schwartz,¹ with a post-mortem, which proves that the cause of the deafness was from hæmorrhages from the tympanic vessels, followed, as in one of our cases, by the escape of a serous discharge, two other cases by perforation, with discharges of purulent fluid.

Most of the authors on diseases of the kidneys have not noticed the affection of the ears with the exception of Rayer and Rosenstein. The first merely cites the fact that there were auditory symptoms in one case.

Rosenstein reports the case of a young girl who, in the course of a parenchymatous nephritis, was taken with deafness—at first intermittent, then persistent and complete. Rosenstein asks, To what cause should this deafness be attributed? He inquires whether it was due to the sulphate of quinine that the patient had taken in the course of the disease, but wisely concludes by assigning it to an "oedema of the auditory nerve."

M. Dieulafoy² reports five cases, and Dr. Grey, of Paris, two, and adding to these the five I have reported and the two from Rayer and Rosenstein and one by Schwartz, makes eighteen.

They may be divided into four classes:

- 1 Permanent and complete deafness, 4
- 2 Marked but temporary deafness, 10
- 3 Dullness of hearing, 4
- 4 Buzzing and roaring in almost all cases.

In all forms of Bright's disease, especially in hæmorrhagic and fatty degeneration of the kidneys, but as a rule, auditory symptoms are found in all forms of nephritis, both acute and chronic.

It will also be noticed that the ear symptoms occur at all stages of nephritis. The intensity of the auditory symptoms vary very much.

The local lesions of the ear are as follows:

Hyperæmia of the membrana tympani, deposit of blood, serum and pus with or without perforation of the membrana tympani, vascularity, on a level with the handle of the malleus, with hæmorrhages within the labyrinth, either as serous or it may be sanguineous fluid, and later fatty degeneration of the auditory nerve.

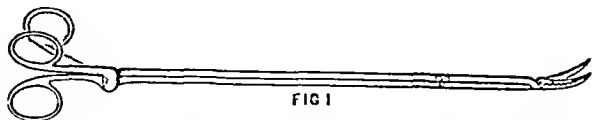
These symptoms of disturbance of the hearing may be of assistance in the diagnosis of an obscure case of Bright's disease. At times we have neither oedema or affections of the eyes and the only symptom in interstitial nephritis is the cardiac hypertrophy with the auditory symptoms, but the examination of the urine will generally confirm the diagnosis.

The following is a letter from John M. Crafts, M.D., Cayahoga Falls, Summit county, Ohio, received after hearing me read the above paper presented to the special section named:

"Something more than five years ago my wife began to complain of tinnitus aurium. Had I known what I fully believe since hearing your very valuable paper, I should not have been so long in the dark, but I of course consulted an oculist and aurist of this city, and perhaps the golden moment which might have restored her health was past. Shortly after this first symptom, say three months, she became slightly deaf, at which time large amounts of albumen were forming, and have never been entirely absent, even up to this present time. At present she is very deaf."

CATHETER BROKEN OFF IN PROSTATIC PORTION OF URETHRA—EXPEDITIOUS REMOVAL

By ARTHUR L. WORDEN, M.D., DES MOINES, IOWA



The above cut represents an instrument which once helped me out of such a difficulty, without the patient ever knowing what had happened.

I had occasion to pass a soft rubber catheter, No. 11, into the bladder of a colored man. After draw-

¹Archiv für Ohrenheilkunde, Bd. II p. 12

²Gaz. Hebdomadaire

ing his urine and attempting to withdraw the catheter, imagine my dismay at having it break off in the prostatic region. Without mentioning the fact to my patient, I immediately passed the urethral forceps, and easily securing a grasp upon the broken end, at once withdrew the fragment entire.

On another occasion I was unfortunate enough to have a pledget of absorbent cotton slip from my application, and remain in the cavity of the uterus. Again my alligator forceps came to my rescue, and I removed the foreign body without difficulty. The blunt end renders it as easy of introduction as an ordinary silver catheter. The cut represents the mechanism by which the greater part of the instrument is worked by a sliding motion, which in turn opens and closes the short alligator blades. With this instrument a firmer hold may be secured, and the fragment is not so liable to break. The compound silver catheters sometimes break off, and may be easily removed by this forceps, whereas the screw would be entirely useless. The greater safety of the forceps is obvious.

320 Fifth street

THE OUTERMOST RIM OF NEBRASKA'S FIELD OF
MEDICINE--INTRODUCTORY TO THE FOURTH
COURSE OF LECTURES IN THE OMAHA
MEDICAL COLLEGE

PY A S V MANSFELDE, M D, PROFESSOR OF PATHOL-
OGY AND HISTOLOGY

LADIES AND GENTLEMEN Nebraska physicians and Nebraska institutions of learning have within the last year received their share of attention, sometimes gratifying to us, and at others quite contrary emotions were the result of such notices. Of course adverse criticism may have often been just, when, human-like, we smarted under the lash. Again, honest as the critic may have been, yet unacquainted with our faults and our virtues, our past record and our hopes for the future, he did not deal with us as he would wish to be dealt by. One common error is engendered by the idea—universal, I think, east of Chicago—that Nebraska and her institutions, her children and her citizens still bear the stamp of a semi-barbarism commensurate to the products of a soil prolific in thistles and sage brush. Few people, comparatively speaking, seem to be aware of the fact that we find time to pay attention to the important questions of the day, or that our minds are capable of a correct understanding of the issues involved. No calling is exempt from the mighty stirring of the "*Zeitgeist*" (or spirit of the times). "All things are being borne along on a stream of tendency, all things are in process of becoming riper and maturer, of being evolved into higher moods, statics, shapes, and manipulations. The *Zeitgeist* halts never in one shape, but is forever assuming new forms and aspects, is undergoing an eternal metamorphosis. There is no pause nor rest in the process of evolution."

The profession of medicine forms no exception to this order of the universe so aptly put by the sage of old "*Tempora mutantur et nos mutamur in illis*." We have our burning questions, of which I may men-

tion. The work of the State Medical Societies, the duties of the State to prevent quackery, and also its obligations to educate physicians, the right of women to study and practice medicine, our ethical laws, and our relations to them, and many more. Want of time will prevent me from doing justice to all of these, or any one of them, yet I have accepted with great pleasure the invitation which gives me a chance to speak, to an appreciative audience, of medicine—not of medicine, however, as I shall present it to the minds of the students who have sought this institution for the purpose of an introduction to Esculapius' daughter—an acquaintance, I assure them, which ere long will ripen into a familiarity of the most cordial kind—nay, I wish to speak to you of medicine as it presents itself to all of us—the living goddess—and we will follow her in her health-bestowing, pain-assuaging, life-prolonging career until we reach with her the outermost rim of Nebraska's field of medicine, noting carefully what we see here indicative of the possibilities of the future.

Centrally, as we look back upon what was then called the "Great American Desert," we behold man in his infancy, lying upon his buffalo robe, talking in the delirium of fever of the evil spirits which possess him, or imagining that he is already enjoying the sports of the happy hunting grounds. Yet in his fever he is not alone, the goddess of medicine is there in her least attractive form, in the person of the "medicine man," who, as always with the primitive races, combines within himself the offices of priest and doctor. He joins his incantations with the stews of the herbs of the field, and the product he administers, *volens volens*, to the warrior, successfully banishing the spirits or hastening the pleasures of the chase of the beyond. But with the advent of the pale face across the waters of the Missouri, the disciples of Esculapius assume the familiar robe of legitimate medicine.

Twenty-five years have passed over the head of her ardent disciple since, equipped with pill-bag and lancet, quinine and calomel, he planted his sod house upon the western slope of Douglas county. Some of you here present know what is implied in this innocent statement, it means everything that can break the strongest heart, it means hunger and thirst, the vicissitudes of the weather, the war-whoop of the Indian, the howling of the prairie wolf, but it also means the steeling of nerve and muscle, enlargement of the heart until it finds room for all human woes, both of mind and body, it means the capacity to snatch the bread from the mouths of wife and child, to convert it into quinine to stay disease and death of the fellow-pioneer, it means brotherly love put into practice. What a pleasure it is to me to enjoy the privilege to-day of taking this worthy physician by the hand, his head white as decked with the snow of years, his mind filled with the discoveries of to-day, his heart throbbing with the enthusiasm of youth, when he looks toward the outermost rim of Nebraska's field of medicine. He traveled from the center to the circumference. Though loaded down with the honors of his profession, he still marches on with the tread of perfect manhood, hailing the possi-

bilities of the future O such is the bone and marrow of the medical profession in our prairie State

Midway between center and circumference of our Nebraska field of medicine we meet with ten men of the kind just described, ideal types of manhood and of the profession, not only of Nebraska but of all times and countries These physicians, amid the trials of frontier life, had not lost sight of the demands which their noble profession makes upon its devotees Right here in your beautiful city (then a small town), on the 24th day of June 1868, they met, for the purpose of erecting a home for the goddess of medicine They laid the foundation on that day of the Nebraska State Medical Society, and one by one the physicians of the State have sworn allegiance to her tenets, until to-day we see them march, the peers of their brethren anywhere, toward the outermost rim of our field of medicine, one hundred and thirty strong And on their way they do not loiter idly, but finding plenty of work, they do it joyfully and creditably The pen and the knife both find skillful hands to wield them, so that to-day Nebraska physicians are heard, through the journals of the country, upon the floor of the American Medical Association, as well as upon that of the Nebraska State Medical Society

At the last meeting of this body, seventy of its one hundred and thirty members were present The papers read, both in size and contents, will compare favorably with those of any State Society The discussions evinced erudition and culture, irresistibly demonstrating that our schools of medicine have done no bad work in turning out such products At the same time, they point with the hand of fate to the "*mene, mene, tekel upharsin*" which awaits the institutions and their graduates who do not march onward and upward

But what, in the meantime, has become of the noble ten whose work is so singularly blessed? Three of them did not reach the rim of the field, they fell by the wayside with their armor on, and

"Their virtues are writ most
In the memories of those to whom they came,
Gentle ministers of medicine"

The seven, still living, are yet active members of the State Medical Society, true to their first love It is with great satisfaction that I can point to four of them as founders of the Omaha Medical College and teachers in this institution I do not wish to call the blush of modest protestation to their cheeks, yet my weak effort is inadequate to express the influence these four men have had in shaping the prospects of medicine in this our young commonwealth their noble endeavor has borne fruit of no small proportion,—inestimable when you recollect that their efforts are reverberating in every part of the great Northwest in the deeds of young men and women who took their incentives from these very men

I would illly understand my fellow citizens, whose hearts swell with pride in the contemplation of their successful labors upon Nebraska's virgin soil, if I did not feel assured before hand that their pardon is mine when, upon this occasion, I earnestly protest

against the most delicate intimation that the Nebraska Medical Society, or the majority of its members, evade or seek to abrogate the high principles of the medical profession as defined in the code of the American Medical Association A society which maintained its existence through drought and grasshopper plagues, a body of physicians reared by the hand of nature's God, in His grand image, self-sacrificing, all loving—I say such a combination of men is too far above small temptation to lose sight for one moment of the principles which are the common attributes of every noble man, of every gentle woman, be they physicians or not Yet, if it is not the height of arrogance for me to interpose my opinions in this matter, I remind my hearers of the fact that the soil of Nebraska, in its wonderful productiveness, gives birth not only to fruits, varying from those of other States and countries, but the influence of the environment peculiar to this State has already created a people differing materially from their brothers east of the lakes and Alleghanies Whether we are an improved edition of our brothers and sisters modesty forbids me to decide, but this I know, that we are less prejudiced, more open-handed, more liberal in our views, with hearts quicker throbbing at sight of our fellow creature's sores, and endowed with a larger quantity of charity for their faults than our ancestors who figured in the Boston tea drama or were heroes in the Revolution If such a statement as this is correct, may it not be possible that our wants are not entirely covered by the Code? May not the gigantic strides, with which we have left the past behind, involve also the handiwork of the last generation of doctors? Or are doctors and the Pope the only infallible beings of this mundane sphere? But, in all soberness, we Nebraska physicians mean to abide by and inculcate the principles of the Code, as we do the laws of our State, reserving the right, however, at the proper time and place to try to amend or change the Code, as we do our laws, if they become inadequate or antiquated

There is a phase in the history of medicine which very strikingly proves the difference between western people and those east of the Atlantic Nay, even east of the Alleghanies I refer to the education of women as practitioners of medicine From these faint objections from England as voiced in the British Medical Association, "may not habit, may not the performance of duties, which entail long watching, much exhaustion of mind and body, may they not, will they not so change that fine organization, that sensitive nature of woman, so as to render her dead to those higher feelings of love and sympathy which now make our homes so happy, so blessed?" To an absolute ostracism as practiced by the Massachusetts State Medical Society, an excuse for which action is given in this passage "It is admitted on all hands that a great many imperfectly educated and incompetent women are practicing medicine in this community, and shall we improve our society by admitting many of these into it?" It is true the new variation of the old tune "Thus says the Lord," set to the words of Susan Coolidge—"God has made me a woman, and I am content to be just

what he meant," sang by the gentlemen quoted would shut out all argument, if not happily there were those who have the arrogance to assert that they having an opinion altogether opposite to this, are also, or at least they think they are, interpreters of the language of the living God, and this teaches them in this instance that the facts of nature of primitive man and his life, and the modern work of woman, incontestibly prove her superior vitality, her greater physical endurance, and in spite of a physical degradation reaching over thousands of years, her finer and nobler instincts of the mind. And now it is claimed that the most ennobling, the highest calling of man, "divine physic, will render her dead to those higher feelings of love and sympathy."

The mere tyro in biology must know that nature has been far more lavish in her gifts to the female side of creation, she has endowed her with all those qualities which secure to her the place of excellence in creativeness. Even prior to her advent, the environment and its influences betoken a greater care bestowed upon the favorite. Greater space for development is allotted to her, and her food is of a choicer kind and more abundantly supplied, therefore, already at the gates of life, she demonstrates the beneficial effects of these causes.

Thus, however loathsome this thought may be to the average male mind, irresistible facts seem to prove the necessity of the more perfect combination of circumstances, all in the direction of superior qualities for the production of female offspring, and since these conditions cannot be said to exist in the majority of cases the legitimate conclusions are drawn that male births preponderate, and secondly that males have not the vitality that the female enjoys by reason of her superior developmental advantages. Further, it is a fact patent to every observant physician that the resistance to disease is by far greater in females than it is in their brothers. Whence then the infallibility of the *divine Dea*, that by reason of their organization women are not to be compared with men as to their fitness to practice the healing art? "May not the performance of duties which entail long watching * * * so change that finer organization, that sensitive nature of woman," etc.

Nowhere in the life history of woman, of those women who have been, and have furnished the brain and marrow of nations (others are of no account), can data be found which would even approximately justify such predictions. Look down the vista of years until, in the mists of the first centuries of the Christian era, you see the female moving about in her domestic relations and duties in the forests of Germany, your and my ancestors—are you not surprised at the similarity of the picture presented to your eyes to one which has often enough met them when taking in the panorama of an Indian village?—the same Lord of creation (?) then as now demonstrating the inferior physical endurance of the female by putting it to such tests as carrying wood and water, tilling the soil, and in fact doing and enduring everything. Shall we go farther back and contem-

plate the scenes transpiring in the home of the Alalus. Where, to the equal work of rearing and protecting her offspring, protecting it against enemies compared with whom the hawk and the thrush are but pigmies, the gigantic beasts of her sylvan abode or her lagoon fortress prove fit antagonists to the physical strength and endurance of this our primeval mother. And as the ages have rolled on upon the sea of time we find woman upon the battle-fields of Herman and Varus, battle-axe in one hand and soothing draught in the other, urging man to victory or ministering to his wounds, until in this latter half of the nineteenth century, she, still true to her instincts, proves the heroine and the angel of mercy on the battle-fields of Bull Run and Chattanooga. The characteristic sign in the history of man has ever been progress, from his anthropoid kinship to his present civilized relations, he has ever evolved better, greater things, and *woman was his mother always!*

She has not only kept apace with him, but has given the impetus to every good in him and coming from him, until to-day it is claimed, "that she may be rendered dead to those higher feelings of love and sympathy, which now make our homes so happy, so blessed," by preparing to do to perfection, what she has practiced instinctively since man was wounded and babies took sick.

Woman must have a power of resistance truly wonderful, that she still, after ages of such experience, can be spoken of as having "that fine organization, that sensitive nature." To suppose, then, that the noblest, most exalted of callings, the practice of medicine, should do that for her which the degradation of thousands of years has not accomplished, is asking too much of our credulity.

When, therefore, the Secretary of the Nebraska State Medical Society was ordered to cast the vote of the Society for the first female physician who applied for admittance, *not one voice was raised in objection!*—Nay, an enthusiastic member, foreseeing the pleasure and the profit of marching toward the outermost rim of our field of medicine in such good company, moved the remission of all dues—which privilege was promptly, and very wisely, I think, declined. Women want but one privilege, equal opportunities. The Nebraska State Medical Society and this institution have, by their actions, admitted the justness of the demand, and as long as I am a member of either, I shall guard their rights with a zeal equaled only by my love for my profession. The physician and teacher who cannot breathe freely and speak with becoming dignity and modesty in the presence of woman, be she a physician or a student of medicine, or neither, is not only not fit to enter the chamber of sickness, but his mouth is not clean enough to utter one word in behalf of medical science. Happily, I have not seen one such poison weed spring from the soil of our prairie State. To the contrary, we take good care of the plant, yet young in years, well knowing what Nebraska can do in the way of growth.

Marching now in better company toward the rim of Nebraska's field of medicine, which we have almost reached, we halt in view of this building, over the entrance of which we read Omaha Medical Col-

lege, and since "fools rush in, where angels fear to tread," we wisely halt, and listen to some one in the rear who says warningly

"For our part, however, if we could be convinced that legislative codes of ethics had efficacy, we should advocate one that made it not only an ethical offence, but a medical crime, to establish cheap, two-term schools, ostensibly for the convenience of the community, but really for the aggrandizement of local physicians. We shall gladly welcome and support any new medical college, Western or Eastern, which honestly undertakes the higher medical education. Such colleges are indeed needed, but to say any part of our country wants more of the ordinary kind of cheap-John educational diploma factories, is a monstrous excursion from the limits of the actual." Another voice is heard. "The medical school at Omaha is fairly established, as its promoters inform us, but the position you took toward the same was undeniably just."

Now I can vouch for the fact that the first speaker is from New York, and he has no time or inclination to enter with us this building. The last speaker, if it can be possible that he breathes Nebraska air habitually, which I doubt, is neither a good citizen nor is he willing to abide by facts.

Let us see. You are all agreed that the most vital interests nearest the heart of every good citizen must be the education of his children—an education which will prepare them to take their share in the work which makes society possible, and which in its effects perpetuates the glorious privileges of American citizenship. The achievement of such results must be the aim of our government, that of State and Union, yet it does not follow that a good physician, a learned attorney or a perfect preacher are units of vital moment in our State however much the individual may be in need of their services, but the man and the woman whose education enables them to abide by the laws of their country because such laws are to them evidence of a higher civilization—such persons are indeed indispensable parts of our commonwealth, and in the rearing of such alone the State is interested. Nebraska must not educate physicians and lawyers, but citizens, yet she would not deserve a place among the other States of the Union did she not likewise foster science and letters upon her soil. It is time that her sister States should realize that she is capable of products higher in the scale of the world's market than corn and cattle.

When we demonstrate our inability to accomplish this, it is time for those who have been more fortunate in their endeavors to "come over to Macedonia and help us." In the meantime no such cry of distress is heard, and any insinuations that this school is established upon the narrow basis of personal aggrandizement, point only to a mirror reflecting self in its most hideous form. Assertion to such people of pure disinterestedness on our part are out of place. Facts must be brought forward if not to convince, at least to hush their unjust criticisms.

Modesty forbids me to compare the faculty of this College with those of like institutions in the East, but it may be opportune to speak of our hopes for

the future, sustained, as they are, by the products of the past, to which we point with pride in the persons of our graduates. Our position is the one the Rev. Horatio Stebbins', paraphrased thus "Show your man, that is the real test of teaching"—and we are not afraid to show our graduates.

I voice but the feeling of all of us, in quoting from letters received but a few days since from one of the faculty, who says "No man can be properly prepared for practice by two courses of only four or six months, and no professor, however great his ability, can do his subject justice in the short time now consumed in obtaining a medical education. We must cram the students from beginning to close of session, and then apologize because a number of important subjects have been unnoticed for want of time." I am rejoiced that you so heartily concede with me in reference to medical education. While three courses of lectures give the students greater time for study and reflection, this plan does not give the lecturers any more time to go over their field, but a nine months' course will be advantageous to both professor and students. I am strongly in favor, therefore, when the time arrives, to make the change and adopt the latter." That Eastern schools, nearly all of them, are in the same position, facts demonstrate. Then what do they want? They call the West fast, is there not great danger that we will give another exhibition, ere long, of the truthfulness of this charge?

Truly, the medical profession of Nebraska, its teachers and students, obey the impulse of the age, not the "spirit of boom," however, but the powerful stimulus given by scientific research and progress. We do not lag behind, but march abreast with our peers elsewhere.

The outermost rim of Nebraska's field of medicine, bright as it may appear to us, is yet studded everywhere with outposts, eagerly looking for new truths, new discoveries upon this ever-widening field, and beyond it they behold in the dawn of to-morrow medical science, art and letters cultivated by skillful and loving hands, and grown to proportions of which our imagination can draw no picture. To-day Nebraska with her half million people is yet in her boyhood, playing with her possibilities as innocent childhood with a rattle, but to-morrow with her fifty million inhabitants she will feel her manhood, and then science and art and letters will receive the lion's share of attention.

We of to-day shall never behold this glorious consummation, yet in our several spheres we feel the importance of our lives as factors in the realization of the achievements of futurity. If we are but modest laborers carrying only brick we feel that these are needed to build the grand temple of Nebraska's greatness. And if in the recesses of our hearts a hope finds food that our honest endeavors in this institution may yet be crowned by the turning out of a corner-stone here and there, who shall dare to bid us crush it from our breasts?

My, teachers, students, and friends of this institution, all will combine to make this college a monument of individual pluck and Nebraska enterprise,

and when the outmost rim of Nebraska's field of medicine has advanced many leagues from the shadow of its walls, may it still stand out in bold relief as a mile-stone, marking the progress of scientific medicine. Then gone to our rest, our children will say with Goethe—

"Bold was the endeavor,
Splendid the pay"

MEDICAL PROGRESS

COLORING MATTERS OF THE URINE IN MICROSCOPIC EXAMINATIONS—Dr C Méhn (*Annales des Maladies des Organes Gento-Urinaires*) Some five years ago Dr Méhn suggested the use of a saturated solution of ammonium sulphate to precipitate urobiline and other biliary pigments from slightly acid solutions by which process he readily separated the pathological coloring matters of the urine, also extracting the fatty matters from the so-called chylous urine. The present article treats of a method of re-dissolving these substances to facilitate the examination of urinary sediments. For this purpose he uses the ordinary sodium phosphate of pharmacy, in a cold saturated solution, which dissolves readily the ordinary bile pigments which can anew be precipitated by the ammonium sulphate. To relieve the anatomical elements of the pigment which obscures them, a few drops of this solution added cold, in a few moments re-dissolves the pigment and the urates so as to allow of an easy microscopic examination. An excess of the re-agent seems to present no inconvenience. Many urines are so charged with coloring matters that on cooling form a thick coloring of alkaline urates, of uroerythrine, of urobiline, etc., over the anatomical elements which renders them unrecognizable. The leucocytes, spermatozoa, tubercasts, etc., lose their definition. In rheumatism, pneumonia or febrile affections the brick-dust sediment of the alkaline urates which forms on the cooling of the urine, is made to disappear on the addition of a few drops or grammes of the sodium phosphate solution, and thus allow of a clear definition of the anatomical elements.

The addition of a small quantity of sodium phosphate does not interfere with the subsequent quantitative analysis of uric acid, when the microscopic examination is concluded, it is only necessary to reunite the decanted liquid and the sediment, and add hydrochloric acid to find the uric acid precipitating gradually. Dr Méhn concludes from these facts and from practical observations in the treatment of cases that sodium phosphate in doses of from two to five grammes per day, in cases of icterus and others where the urine is loaded with urates and bile pigments, will produce a beneficial effect and can be used where the alkaline mineral waters, such as Vichy, etc., are not tolerated.

THE HYDRO-AERIAL CATHETER—This instrument has been described in the *Encyclopedie Internationale de Chirurgie* (t 11, p 247, June, 1883), and consists of a hollow sound which admits the passage of a

filiform bougie. At its superior extremity it terminates in a metal tambour, to which is attached a thin rubber cylinder, shaped like a glove finger, pressure upon which, with the sound in the urethra, would exert considerable air force. In addition, a reservoir of water communicates by a tube with the metallic tambour, and thus with the cavity of the sound. The sound can be readily detached and bougies of various sizes introduced. The object of the apparatus is easily understood, it is to overcome urethral obstructions by the simultaneous use of a bougie and hydraulic pressure, in this way obliterating obstacles due to mucus folds, to fungosities, and to flexures of the urethral canal. In urethral spasm, the continued hydraulic pressure, so regular and innocuous, masters the energetic contractions which the use of instruments so often merely exaggerates. The inventor, L. Duchastelet, in the *Annales des Maladies des Organes Gento-Urinaires*, Aug 1, has given four cases in detail where this instrument was used to great advantage.

CLONIC SPASMS OF THE UTERUS DURING THE PERIODS OF GESTATION AND OF LACTATION—Dr Nozeran (*Gaz. Hecdomadaire des Sc. Med.*, Aug 25) This writer describes the case of a woman 30 years of age, of a lymphatic nervous temperament, vigorous constitution, and slightly chloro-anæmic. No history to utilize. During her second pregnancy, at the second month, she was taken with a series of disordered, irregular, intermittent movements in the abdomen, which continued less frequently at night, they differed in character from foetal movements, and continued throughout the pregnancy and subsequent lactation, ceasing only at the period of weaning. The spasms were so violent at times as to waken her husband when he slept by her. Her third pregnancy was marked by the same phenomena, and she first consulted the doctor while nursing this child at five months, which was well nourished. On making an examination, Dr Nozeran found the uterus to harden as in the commencement of a labor-pain, raising its volume by disordered and very violent movements, as if influenced by galvanism. It was easy to determine that the muscles of the abdominal walls took no part in this spasmodic movement.

The doctor lays stress upon two points in this case. 1st The existence of uterine spasms independent of the will, occurring during pregnancy, without hastening the term of pregnancy or interfering with its normal evolution, spasms compatible with perfect health.

2nd The resistance of this essentially neuropathic condition to antispasmodic treatment.

The treatment which promised the best result was that of mechanical compression, but the patient would not submit to it long enough to obtain relief.

DEVELOPMENT OF AN ERECTILE TUMOR DURING PREGNANCY—M. Larzan, *Union Med. de la Sic. Inférieure*, No 71—Mme G. presented at the fifth month of pregnancy a pimple of the size of a small pin's head on the extremity of the nose, remaining

stationary a month. At the end of that time, at the request of the patient, and believing it to be simple acne, it was cauterized lightly with nitrate of silver. Afterwards in washing the face the scab was rubbed off and a hæmorrhage ensued which it was difficult to check. The blood was projected by intermittent fits several centimeters distant from the nose. From that time the tumor developed, forming an appendage of about a centimeter in thickness and 75 millimeters in length, of a light red color and easily reduced by pressure with the fingers without any pulsation—being evidently an erectile tumor. It was not further interfered with, and the day after delivery at times was paler and less prominent. The following day it was much diminished in size, and at the end of six days it was hardly visible—soon after disappearing altogether.

ON THE CONSOLIDATION OF FRACTURES IN CASES DIABETES.—M. Verneuil, *Bulletin de l'Acad. de Med., Paris*, No. 30.—M. Verneuil gives three cases in detail where the presence of glycosuria was determined in connection with fractures, and where the separative process which results in consolidation was seriously impeded. The first case was a compound fracture of the left arm in a workman of 35 years of age, sober and of regular habits. In this case four months elapsed before consolidation was established. The second case was a fracture of the neck of the humerus, where union was apparently satisfactory, and the patient left the hospital to return suffering from another injury of which he died in two days, but which had no connection with the fracture of the humerus. The autopsy made more than three months after the receipt of the fracture, disclosed simply a provisional periostitic callus thrown out about the seat of fracture. The third case was a simple fracture of the forearm in a man 54 years of age, whose urine contained 79.60 of sugar per liter. The sugar disappeared under treatment in about six months, but, while there was no displacement or deformity at the seat of fracture, there was no consolidation.

A fourth case is recited of fracture of the lower extremity of the left radius, where, owing to the marked absence of pain, the urine was examined and sugar found to be present, 6 gr. 30 per liter, M. Verneuil having previously noted that anesthesia was marked in the foregoing cases of fracture in diabetic patients. In this case a perfectly satisfactory result was obtained after the usual lapse of time, and the diabetic symptoms disappeared.

In summing up his cases M. Verneuil considers the fact that first case was one of compound fracture, does not influence the result as the inflammation was superficial. That as regards the condition of general health, while in two it was poor, in the third it was excellent. He considers the fact thus established adds one more to the causes which retard or prevent the consolidation of fractures. All surgeons know that wounds in diabetic patients become very often the point of departure of serious accidents and the seat of various local complications. Union by the first intention is rare, and secondary union is slow

and tedious in simple wounds, which fact has more than once caused an examination of the urine and determined the presence of diabetes, which had previously been ignored. The formation of callus is only a variety of the general traumatic process, and is subject to the same influences. The fourth case was the subject simply of an ephemeral diabetes, and was much less dyscrasic than the three others.

As regards the various theories in explanation of the genesis of diabetes, M. Verneuil considers his cases favor the views of M. Boushard, who classes diabetes among the diseases due to a diminution of nutrition. The reparation of wounded tissues is a form of nutrition. This reduces the subject to three propositions.

1st The delay and absence of consolidation, as shown in three cases of fracture, seem to be due to a dyscrasia simultaneously recognized—that is to diabetes.

2nd This delay and absence of consolidation implies necessarily a diminution or suppression of reparative force, a particular form of nutrition.

3d Whence it is permissible to conclude that diabetes, when it checks or prevents the formation of callus, influences at least, if it does not cause it directly, the diminution or the suppression of nutrition.

THE USE OF AN ELASTIC RESPIRATOR TO RELIEVE THE DYSPNŒA OF PULMONARY EMPHYSEMA.—Prof. Bazile Feris describes an apparatus in the *Bulletin Gen. Therapeutique*, etc. (August 15), which is nothing more nor less than a slightly modified double hernia truss, the pad for the back being enlarged and made less prominent, and the hernial pads also being made to extend over a greater area of surface. The metal springs as arms pass under the axillæ, and the hernial pads exercise pressure over the pectoral muscles and the ribs, while straps retain the apparatus in place. The writer claims that patients are enabled by this apparatus to take full and proper inspirations, while expiration is assisted and made complete. It can readily be worn under the clothing without being noticed. Prof. Feris has used it in thirteen cases of emphysema with marked benefit. He cites of case where a patient was using temporarily a hernia truss until the properly adjusted apparatus could be made for him. Desiring to go from the hospital into town for the day, and the truss having a clumsy, prominent appearance, he left it off, but had gone but a short distance when his dyspnœa forced him to return, with the aid of a friend, and replace his apparatus, with which he again passed out, and did not return for seven hours.

The spirometer used in these cases has shown that the amount of air passing into the lungs was markedly increased. The respiratory movements are also diminished in number, and the greatest benefit was obtained when the pads were placed over the first and second intercostal spaces. The paroxysms of asthma become less marked and less frequent. The emphysema, when localized, shows less tendency to extend, and the blood of the pulmonary artery circulates more readily through the small vessels, thus rel-

the right side of the heart. It requires a certain time to get accustomed to the instrument, but not more so than with a truss.

IODOFORM POISONING—Dr Pick gives two cases in the *Deutsche Medicinische Wochenschrift* for July 25. The first occurred in a bricklayer 43 years of age, well nourished but of a highly scrofulous family, who suffered from an abscess, the result of caries necrotica of the sixth rib, which was laid open freely and the necrotic rib removed, the wound scraped with a sharp curette, cleansed with a five per cent carbolic acid solution filled with crystalized iodoform, and closed with sutures. It healed partly by first intentions. At the lower portion there was a small discharge of odorless secretion partly mixed with iodoform powder. After the lapse of a few weeks, the wound seemed to close and the patient went about his business. Suddenly the wound broke out anew, and was again sprinkled this time with powdered iodoform. Ten to twelve days later the patient began to complain of lassitude and want of appetite, which was soon followed by vomiting and purging with a marked distention of the abdomen. The temperature was normal, pulse accelerated. Suddenly active delirium set in. The patient constantly sprang out of bed, wanted to go into the street, poured the contents of the urinal about the room, tore off his dressings, etc. He recognised his physicians, but talked at random. The temperature was not increased, the pulse was much accelerated. The urine contained albumen and was markedly loaded with iodine—(in 660 cc of urine was shown 0.024 of iodine). The iodoform was immediately removed with the greatest care. The delirium did not return, but it left the patient in a condition of melancholy, and remarkably rapid emaciation. After a few days he complained of pains in the back, which proved to be caused by exudative pleurisy of the right side. He died soon after the appearance of the exudation. No autopsy.

CASE 2—An unmarried woman of 40 years of age, sickly from early life, suffered from caries of the right forearm, etc., moderately well nourished. She was operated upon for the relief of lupus faciei, which, on the right cheek, for the greater part showed cicatrices, on the left cheek four large spots resembling abscesses and filled with soft lupus tissue. About two-thirds of the nose was transformed into an ulcer with superficial scab while the right ear had also two deep ulcers. Cod liver oil internally, iodoform vaseline (15, later 11) externally to the nose and ear. The pustular lupus nests on the left cheek were laid open, scraped with the curette and filled with crystalized iodoform. While the nose and ear showed decided improvement, new proliferations appeared at the points operated upon. An operation under chloroform was then performed, removing completely the pustules of the face and nose. The wounds were thoroughly sprinkled with crystalized iodoform and salicylated wadding placed over them. In the afternoon frequent vomiting ensued, continuing for three days, with it headache and complaints

of the taste and smell of iodoform, which later was supposed to be due to the iodoform nasal injection. The third day the application was repeated. Now a severe diarrhoea set in, the teeth, gums and hard palate were covered with a tough, yellowish pellicle, which could be removed by piecemeal through the aid of dressing forceps, the tongue was also covered and very dry, the appetite was entirely lost, the voice was whining, but the sensorium comparatively clear, sleep was totally absent, rapid and remarkable loss of strength, pulse small and accelerated, temperature between 38.5 (morning) and 39.4 (evening), urine diminished, thickened and undoubtedly containing iodine. About the fifth or sixth day the patient complained of severe pains in the left side that were increased on moving the correspondingly. As the cause of this there appeared a cord-like, about two and one-half centimeters long, induration at Poupart's ligament. Also a swelling was found the size of a bean in the left popliteal space which was painful on pressure.

On the sixth day the iodoform was carefully removed from all the wounds. Gradually the fever diminished and there was a slow general improvement, the diarrhoea and meteorism continued for six or seven days longer. On the evening of the sixteenth day of convalescence a totally unexpected but severe rigor appeared, followed by profuse perspiration, small pulse, which could hardly be counted, and a temperature of over 40°. The sensorium was clear. The following morning the temperature was 39, the patient had slept pretty well and felt better. Convalescence now continued steadily, and in five and one-half weeks the patient, emaciated almost to a skeleton, left her bed for the first time. At this time there was still some pain in the left popliteal space, where there was a hardness some centimeters long of the thickness, but not very painful on pressure. The left part was also slightly swollen. These conditions disappeared in the course of the next week.

Sometime after a new operation was performed without chloroform, but the iodoform applications were renewed, when on the following day the patient complained of loss of appetite and of feeling badly. This becoming more marked on the third day, the iodoform was carefully removed, resulting in a perfect relief of the symptoms. Again the operation was performed without the use of the iodoform, and the next day the patient was fully able to attend to her household duties.

IODOFORM INTOXICATION—P. J. Hays, F.R.C.S.E., gives us a case in the *Dublin Journal of Medical Science* for August, which is interesting in connection with the foregoing cases of Dr Pick. The condition occurred in a man 23 years of age, slender frame, temperate habits, and a field laborer. He suffered from an abscess two inches below the inferior angle of the right scapula. Fourteen ounces of pus were evacuated by aspiration. The abscess refilled so rapidly that it was opened, a drainage tube inserted, and 60 grains of iodoform introduced, and repeated four times at intervals of two days. On the evening of the fourth application, the patient developed alarming

symptoms, he became delirious, his temperature rose to 104°F , the pulse rate reached 120 in the minute, lay in a stupor, mouth open, pupils dilated, sphincters relaxed, tongue dry and brown, no vomiting, marked impairment of muscular power, mind obscured. This condition continued for five days then a sharp attack of diarrhoea occurred, and the patient's condition underwent a change for the better. He evidently began to recover consciousness, although he continued to present a dazed aspect, and whenever the doctor approached his bed he endeavored to assume an all-four position, resting on his hands and knees, as though he expected his back was to be dressed. From this time his progress was satisfactory, and by the eleventh day from the development of symptoms he seemed to be free from traces of iodoform intoxication. The urine was examined. The sp gr was 1036, the urine being concentrated and scanty. Neither sugar nor albumen could be discovered but the reaction characteristic of the presence of iodides was readily obtained.

In the discussion of this case Mr Hayes adopts the views of Hargy on the absorption of iodoform by raw surfaces, that fatty matters exposed in the wounded surface serve to dissolve the iodoform, and so prepare it for absorption. Then the compound having entered the living tissues in a state of solution, the iodine in great measure separates from carbon and hydrogen, and combines with albumen, constituting an iodide of albumen, which can be readily conveyed to every part of the organism. Iodoform seems to possess cumulative properties, but the work of elimination by the excretory and other organs (kidneys and salivary glands) commences early. According to Martin, iodides can be detected in the urine some hours after application of the first dressing, and their amount bears a direct relationship to the quantity of iodoform absorbed. To test for iodides in the urine, a little chloroform is first added to the liquid, and then a few drops of nitric acid. The iodine set free causes a fine red amethyst coloration of the fluid. This must be done before ammoniacal decomposition, and care must be taken to avoid an excess of nitric acid.

ON THE USE OF THE CAUTERIZING ECRASEUR FORCEPS IN HÆMORRHOIDS—The use of this instrument, which is the invention of Prof Richet, is very fully described by Dr Bazy in *La France Médicale* for August 23. The instrument itself resembles in shape the curling-tongs of the hair-dresser, except that its branches are thicker, and their opposing surfaces are channeled at their free extremity for about three or four cent. In its use, a portion of the hæmorrhoidal mass is drawn out by a tenaculum passed in deeply, and copper wire carried through the base of the part so exposed, thus forming a solid and resisting handle with which to control portions of the tumor. This is continued by two or three more of the copper wires, according to the volume of the tumor, the circumference of the anus being protected by moist compresses. This done, the surgeon draws upon one of the wires, producing a sort of pedicle, which he squeezes between the branches of his heated forceps

until they meet. The copper wire remains in his hand, and the hæmorrhoidal mass is but a blackened band as thin as paper. This mode of destroying hæmorrhoids has sometimes been given the name of *volatilization*. The same process is gone through with each of the other wires. When finished, the anus shows alternate radii of cauterized bands between the untouched tissue. Hæmorrhage is always slight, more before than after the operation, and due to the use of the tenaculum and needle. It is readily arrested by the cauterization, which follows on the use of the forceps. The next day the parts present an inflamed, swollen appearance, from the tumefaction of the uncauterized portions, which are slightly painful, but may be larger than the original mass. But there is no general reaction, and the inflammation is moderate, in exceptional cases it may be controlled by moist, sedative applications. Dr Bazy has never seen an abscess follow the use of the instrument. In from four to eight days the inflammation subsides completely. The eschar falls off, leaving healthy looking bases, and in three weeks the cure is about complete.

This cauterization destroys the vascular circle of the inferior extremity of the rectum, interrupts its continuity, separates the vascular trunks from the rest of the circulation, and favors obliteration. But the most important result obtained is through the secondary inflammation. This, which is nearly always plastic, produces an adhesive phlebitis, which obliterates the veins, and at the same time causes a peri-phlebitis, which converts the parts not reached by the cautery into a fibrous tissue, in which a relapse is impossible. This tissue, however, is sufficiently extensible to allow of a proper dilatation of the anus during defecation, with sufficient tonicity to close the anal orifice completely. This occlusion has been produced in cases where, before the operation, the habitual protrusion of the hæmorrhoids has relaxed the sphincter so far as to permit of the easy introduction of two or three fingers.

DEODORIZATION OF IODOFORM—M. Tourmont has given the following formula for this purpose to the "Société Pharmacologique d'Emulation" (*See France Médicale*, Aug 12). 1 acid phenic cryst 1 gramme, Iodoform 10 grammes. Powder and mix intimately.

In this mixture the odor of phenol completely supplants that of iodoform, which does not seem to be altered.

2 Iodoform	100 grammes
Essence of mint	5 "
Essence of orange flower,	1 "
Essence of lemon	2 "
Tr of Benzoin	2 "
Acetic acid	1 "

Powder the iodoform, mix it intimately with the essences, tincture and acetic acid, and place the mixture hermetically sealed in a flask, into a water bath to remain for two days at a temperature of 50 to 67°C . It gives a very agreeable and persistent odor, similar to cologne water.

3 camphor, 5 grammes, wood charcoal, 10 grs, iodoform, 16 grs, powder and mix

4 camphor, 5 grs, essence of mint, 2 grs, iodoform, 15 grs, powder and mix

(*Holzwool*) **WOOD WOOL, A NEW SURGICAL DRESSING**—Prof Bruns, of Tübingen, recommends us to use finely ground wood such as is obtained from the *pinus picea*, which is pressed, passed through a sieve, dried and impregnated with a solution containing half per cent of sublimate and ten per cent of glycerine. It is a clean looking, delicate fibered, soft, yellowish white substance, having an odor of fresh wood, and "extraordinarily cheap," is exceedingly elastic even in thin layers, so that bandages can be put on more tightly with this than with any other dressing. Its absorbent properties are so high that it takes up twelve times its own weight of water.

In his own clinic his mode of dressing is exceedingly simple. After the wound has been disinfected by copious irrigation with a one per cent (?) solution of sublimate, and the drainage tubes have been placed in, the suture line is covered with a layer of glass-wool. Upon this is placed a sufficient quantity of wood wool, either simply wrapped in sublimate gauze or sewn up in the form of a pillow, covered by a larger one that will widely overlap this in all directions, the whole being fastened on by a firm binder. In four months time, 180 operations, and wounds were treated, the majority with wood-wool, the first dressing, with few exceptions, remaining from one to four weeks untouched. Occasionally patches of moisture were visible on the earlier days, but in a short time these became dry and remained so, and when the dressings were changed the wounds were absolutely dry and free from irritation, with the exception of one case of erysipelas. No complication was observed throughout. (*Medical Press and Circular*, Aug 29)

TURPENTINE IN SECONDARY SYPHILIS AND IN PHAGEDENIC SORES FOLLOWING FEVER—A writer (Deputy Insp General Brinsley Nicholson, M D) in the *Medical Times and Gazette*, for Sept 1st, recommends turpentine very highly in syphilitic plagues, giving a drachm twice daily in an emulsion made with liq potass, and two ounces of water. He cites two cases of perfect relief, but fails to relieve orchitis or fibers (suppurative and non-suppurating). In the phagedenic sores following fever. He cites one case in a boy of ten who had passed through an attack of continued fever, when during a tedious convalescence two sores appeared, one over the right trochanter and the other over the left thigh. They soon became phagedenic and were treated locally by various applications, without much effect. Twenty minims of turpentine were given twice daily, with the effect of gradually producing a more healthy appearance in the sores. The treatment was stopped for a time under the charge of another practitioner, during the absence of Dr Nicholson, but renewed at his return, and the patient eventually got well. While these statements are interesting, the cases are not recorded with sufficient accuracy as to details to warrant positive conclusions.

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PUBLISHED WEEKLY

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, OCTOBER 6, 1883

CONTRACT PRACTICE AND ETHICS—In the department for correspondence in this number of the JOURNAL will be found a letter from Dr J W Russey, of Georgia, making a plea in favor of contracts for ordinary practice under certain circumstances mentioned in the letter. Dr Russey writes in a spirit of liberality and candor, worthy of general imitation, and as his plea is probably the best that could be made in favor of any kind of contracts for the performance of ordinary medical and surgical practice, he will not think us unkind if we analyze and examine briefly the basis of that plea for the general good. The essential features of the case are as follows:

1st A corporation employing a large number of workmen levy a per capita tax, or, in other words, retain a certain percentage of each man's wages for the purpose of paying a physician a stipulated salary per month or year, in return for which he is to promptly attend "all or any employes who may be injured or fall sick while engaged by the company." Such is the contract. 2d The facts which are alleged to justify it are, the large percentage of the laborers who are opposed to paying anything for medical or surgical attendance, though very far removed from the pauper class, and yet they are the ones that have the most sickness. Consequently, without a contract with the company, the physician who should attend them would get very little pay for his services. Furthermore it secures to the afflicted prompt and early attendance which is a great advantage to all the parties concerned.

From a disinterested standpoint several questions arise 1st Is there any justice and propriety in taking a portion of the wages of intelligent, prudent and upright laborers, who in the nature of things, and as stated in the letter, furnish only a small part of the sickness, and use it for the benefit of the ignorant, heedless and vicious who are working side by side with them? 2d Is it right or just by imposing a tax on the first named class of laborers to pay some one physician selected by a corporation or company, to constrain them to the employment of such physician whether they have confidence in his skill and fidelity or not, or if they choose another to suffer the additional injustice of contributing to the salary of one physician and paying another full fees for services to themselves and their families? Instances of this kind have come under our observation many times 3d Is it just to his neighboring physicians engaged in practice, to make a contract with a corporation or company for a specified salary to do an undefinable amount of ordinary medical and surgical service for a large class of citizens, whether laborers or not, without fees from the parties receiving the service, but for which they are taxed in such a way as to make it decidedly for their pecuniary interest to employ him only? Is it quite fair to accept a relation professionally, by which, if your brother practitioner happens to be called to one of the laborers covered by your contract, he will be almost certain to be dismissed very soon on the allegation of his neighbors, that it would be very foolish for him to continue to employ and pay Dr A when he was *entitled* to the services of the contract doctor, B without charges? Finally, 4th If it is desirable on account of the improvidence of some of those they employ for companies or corporations employing a large number of laborers to make some provision for securing prompt and adequate medical and surgical attendance upon such as may be sick or injured, and if is proper to retain and appropriate a percentage of their wages for that purpose, would it not be altogether more just both to the individual laborer and to the members of the medical profession if the amount retained from each individual was placed to his credit, and paid out only for medical services rendered to him or his family, leaving him to choose his own physician, and the latter to make only reasonable and ordinary charges for service actually rendered And on final settlement each workman should receive whatever balance remains unexpended of what had been retained from his just earnings

We think a fair consideration of the fol-

questions must inevitably develop the fact that the contract system, as represented by our correspondent, is positively unjust to the better class of laborers, very unfair to the profession at large, and unnecessarily because the benefits sought can be obtained by other methods more consistent with the principles of justice and equality in their application to all the parties concerned

PROGRESS OF INFECTIOUS DISEASES —While the prevalence of cholera in Egypt and India is decreasing, and the danger of outbreaks of yellow fever in our Southern and Southeastern ports daily diminishing for the present season, a marked increase in the prevalence of typhoid fever is taking place in New York city and its suburbs, as well as in many other cities and sections of the country The Sanitary Superintendent of that city states that up to the 1st of September of the present year there had occurred 539 cases of the fever, while for the same period of 1882 the number was only 304 No satisfactory explanation has yet been given concerning the cause or causes giving rise to the increase of typhoid fever in New York city or its vicinity

COLLECTIVE INVESTIGATION OF DISEASE —In a recent number of this journal, we explained the system of collective investigation adopted by the General Committee of the British Medical Association, and gave in illustration a specimen of the circulars and of the blanks for return of answers, together with the fact that the American Medical Association had been invited to co-operate in the same line of investigation, and that the proposition was referred to a committee for consideration Wishing to test the practicability and value of co-operating with the work in Great Britain, by using circular notes, questions, and blanks for returns so nearly identical that the results will be strictly comparable, the American committee has commenced correspondence with that of the British Association, with a fair prospect of harmonious action And it will facilitate the work if such members of the American Medical Association engaged in active general practice, in any part of the country, as are willing to engage personally in making collective investigations, will send their names and address to the editor of this journal within the next thirty days

DOMESTIC CORRESPONDENCE

IONIA, MICHIGAN, }
 Aug 19, 1883 }

EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

Dear Sir—As we have now an organ of the American Medical Association in the interest of scientific medicine, I take the liberty to send you a few lines in regard to the status of the medical profession in this section of the State of quacks. As most of your readers must already be aware, this State until quite recently, has had no law regulating the practice of medicine, and this law is as good as nothing, so that it (the State) has become the receptacle of many of the quacks that have been driven out of other States by statutory enactments. Our liberty-loving legislators some years ago established chairs of homœopathy in our university, thus giving charlatanism the stamp of legality. Homœopaths are put in the service of the United States as pension examiners, and endorsed by the chief medical officer of the pension department, who claims to be a regular of the deepest dye. We could stand all of that, but graduates of regular colleges meet professed homœopaths in consultation. One of these from the city of Grand Rapids makes no distinction between physicians let their title be what it may—so he gets his consultation fee all is lowley. Some of the physicians in this city are doing the same thing, and yet are members of our State Association and of the American Medical Association. Recently there has located here a physician who graduated at several of our best colleges—College of Physicians and Surgeons, of New York, among others, University of Edinburgh—and last winter took the degree of M R C S England, who now consults with a homœopath, supporting his course by the Beaconsfield case and of the New York heretics.

These are called by the public liberals and humanitarians. There are too many of so-called liberals in the regular profession, and I am afraid if all should be excluded from the American Medical Association who break the code of ethics by consulting with irregulars, the Association would be bereft of many of its members. One of the greatest hindrances to relegating these regular quacks to their proper place, (with the hordes of irregular characters), is want of organization among scientific (regular) physicians. Thanks to the efforts of a few straight-haired physicians in this section of our State, we have organized a society under the auspices of the American Medical Association which promises to do effective work both scientifically and ethically. It is called the Union Medical Society of Northern Michigan, includes Ionia, Mount Calm and Micastra counties. It now numbers nearly 50 members. I hope the day is not far distant when medical gentlemen calling themselves regular physicians will have backbone enough to refuse to meet in consultation quacks of all kinds.

Yours, etc ,

"ETHICUS"

CONTRACT PRACTICE AND ETHICS

RIISING FAWN, Ga , Sept 27, 1883
 PROF N S DAVIS, CHICAGO, ILL

Dear Sir In the editorial department of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, of September 1st, is an article, "Contract Practice and Ethics." After reading that article I felt myself to be in a peculiar position.

In the first place, I have always been, so far as I was aware, a staunch advocate of the established code, and opposed to all innovations or attempted changes for the purpose of increasing patronage. Now, from the reply to the query of J P W, and your comments, I find that so long as a physician is under a contract to do ordinary medical practice for a corporation, just so long he is debarred the privileges of a member of the American Medical Association.

Now, in self defense allow some plea for the system.

I am one of the barred class. I am engaged by a corporation to attend all or any employe who may be injured or fall sick while engaged by the company.

Now, the terms of my contract extend to all persons acting in any capacity for said corporation, at a fixed salary, depending on number of employes. There is a large percentage of the laborers who are opposed to paying anything for medical or surgical attendance, and are very far removed from the pauper class, and these are the ones who have most sickness.

Now, the physician who shall attend these has no recourse whatever to obtain remuneration for his time or labor, except as he is remunerated by the corporation employing them. Their time and labor is valuable to the employer, and for this reason a regular physician is employed to care for them, and a reasonable remuneration is paid him, very far in excess of what could be obtained from the small minority who recognize the value and duly appreciate the services of a medical man.

Furthermore, it secures to the afflicted prompt and early attendance, which in many instances prevents long and tedious illness, with its loss of time to the sufferer and strain on the physician.

Ours is also a mixed population. The refined, intelligent, educated, ignorant and demoralized all gathered into one community. Such being the case, there must be some plan followed that will reach all these varying classes, and at the same time not work any hardship to physician or patient. Now, the corporation steps in and requires so much per capita to be set aside for the purpose of remunerating a medical attendant.

This in an old and well established community would be all wrong, and the physician who would resort to such a course for collecting dues would be in the highest degree reprehensible, but with a floating population, with no ties or hindrances, it would be equally as bad for a medical man to be beaten and defrauded of what was duly earned, when it could only be secured by attending all cases under a direct contract with employers.

Whatever relation my present situation may sus

run to the code, I am still an advocate of it in full, as the very fact that it cannot be warped to fit every case is the strongest proof of its excellence.

Though the fact of erring in one particular makes the offender err in all, still I must justify myself by the preceding considerations. The *law* is just, the *man* is guilty.

There are probably *many* readers (and I hope there are) of your valuable journal as culpable as I, who may feel as I do about this subject.

This plea, though a poor one, you can use as you see fit.

Hoping for the welfare and permanence of the JOURNAL,

I am yours truly,

J W RUSSEY, M D

LAINSBURG, MICH., October 1

TO THE EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,

DEAR DOCTOR. It always gives me pleasure to write to a man or body of men, who can appreciate an idea without a surgical operation.

The matter about which I only wish to say a word has been broached many a time, and is now agitating the minds of the profession in various parts of our land, viz,

First—How much do we owe the alleged “manufacturing chemist?”

Second—How much does he owe us?

It furthermore has occurred to many of us, Dear Doctor, that the time when this clay can talk to the potter should pass. For a long series of years it has been the practice of the chemical clay (keeping up the simile) to tell the professional potter how it should be used. How it would act if it was not used as requested, and how the whole business would practically go to ruthless ruin unless the Esculapian demijon was molded to meet its wants.

Again. How are we to distinguish among these various alleged manufacturing chemists? Not one of these gigantic advertising medical swindles but who style themselves “chemists.” “Well,” these men will reply, “the profession know for we have the indorsement of some of their best men.” Exactly. And there is where the laugh comes in.

Here are a class of men depending almost entirely upon the profession for support, who travel just as close to the dividing line between true and false medicine as they can and escape detection. Only the other day I received a letter from an Eastern institution of this sort saying that they had sent me a sample bottle of Phosford's Acid Horsephites or something of the kind (recommended by physicians), and enclosing a postal card for a reply. The reply went in short meter, and to this effect: “All I know about it is that like any ordinary well advertised nostrum, I had to take a dose of it every time I picked up my morning paper, and even in my Sunday reading it came recommended by a clergyman, and that I had had

enough of it to do me 2,700 years.” Now, my Dear Doctor, I ask you and through you the various members of the American Medical Association, is it right or proper that we of the profession, who have to work for a living, should be pestered and bothered in our work in that way?

There is another class of “manufacturing chemists” who do not insinuate their advertisement under everybody's nostrils, but who prey upon the profession with pseudo remedies. They give a formula right along with the bottle. Oh yes, but it is like the “prescription free” which used to come from the physician down in New Jersey, whose “sands of life were nearly run out”—they are the only ones who can prepare it—and their profit is like unto the Dutchman's one per cent.

Isn't it getting to be about time that the profession began to sit down on these open advertisers and secret vendors? I guess yes. And when they do these people will think a mule has kicked them, for it always kicks a man twice before he gets out of reach.

E B WARD

MEDICAL LORE OF THE AMERICAN INDIANS.

MR EDITOR.—A former number of this Journal contained a very interesting article from Dr F Andros, of Mitchell, Dakota, on the Medical and Surgical Lore of the Winnebago and Sioux Indians. In the following paper he continues the subject, with the addition of some points of Indian mythology, connected with their medical theories.

One of his observations as to what were the theological ideas of the Winnebagoes before they were much modified by the ideas of the whites, will interest ethnological scientists. The latter have of late been discussing the question whether the Great Spirit, called by the Chippawas Sha Monedo, was an original idea of the natives, or a modern notion introduced by the missionaries. Dr Andros was a member of the sacred lodge at an early time, when it would probably not be difficult to distinguish new imported ideas from aboriginal ones.

His impression is that the idea is aboriginal. He says that besides the numerous lesser spirits, they recognized one specially Great Spirit, who was the general author of all good. As this spirit was always disposed to do all the good possible, they did not deem it necessary to pay much attention to him, but they had another spirit, who, if not as great as the other, was at least considered very powerful, viz the Bad Spirit,—a special author of evil, whom it was necessary to pacify by various services. Their system therefore would seem to partake of a little of the dualism of Zoroaster and the Parsees.

In this connection it may be worth while to state that there are in this city original manuscripts written some fifty years ago by a Chippawa halfbreed, giving an account of the notions and customs of the northern Chippawas, beyond Lake Superior, whom in his time, he stated to be mostly unaffected by the ideas of the whites. He confirms the idea of Dr

Andros so far as to state that petitions and thanks for success in hunting were regularly offered to the Great Spirit by the chief of Chippawa bands, and that on killing an animal the hunter made special apologies to the special spirits of the animal killed, who might, as they feared, be disposed to revenge their deaths.

These facts derive their scientific interest partly from the recent dispute of scientific men on the aboriginality of the idea of the Great Spirit, and from the fact that the spirit lore of the Indians is the basis of a noble school of their medical art.

E. ANDREWS, M. D.

MITCHELL, D. T., August 6, 1883

DEAR DOCTOR I have been so busy, professionally, that I have neglected an early reply to your two last letters.

I think the Winnebagos and Chippewas have no knowledge of their origin. They have a tradition, but it is so merged with superstition that it is wholly improbable. They are all F F Vs, and spring from a great and powerful stock. In one thing they agree, that their early home was on the great lakes far to the East, or as they express it "from the rising sun." In a recent conversation with an old trader at Fort Hale, he says the Dacotas have some notion that they came from "the rising sun." I am inclined to the belief that the eastern portion of our continent was first settled, and like the whites they have been pushed west either by stronger or more warlike tribes or that they have been the aggressive party.

One thing which would go to corroborate this theory is the immense amount of game which formerly occupied this country. As early as 1843 when I visited this country for the first time, one hundred miles or less from the Mississippi river the buffalo range was struck and the man who has not seen it would be incredulous if told the amount of buffalo then feeding on the plains of Iowa and Dakota. They were almost numberless. Buffalo is far as the vision could reach. Now 500 miles west very few are seen. They left east of the Missouri in 1873, since which time only an occasional one has been seen, and this was long before the whites occupied the country.

A few words regarding their medical practice. They have two schools of medicine. The one use baths, bleeding and medicinal herbs. The other resort to the marvelous. The latter are seldom called until the medicine man has exhausted his store of knowledge and the patience of the patient. Then comes the Great Wabeno. A lodge is prepared with great pomp and parade. Every stick used in its construction is of different variety of timber. This frame work is covered with skins or bark. The patient is placed within. Then comes the Great Wabeno fantastically dressed, with drum and rattle, accompanied with an improvised song, the burden of which is a request to the spirit of disease to vacate the premises. This is accompanied with the laying on of hands and sucking the flesh of the patient in different parts. The effect produced is the same I

have seen in animal magnetism among the whites. The singing is really ventriloquism, the sound seeming to come from above and not from the lips of the performer. If the medicine man is successful and the patient recovers it adds to the reputation of the magician, and as among the doctors of the present age, he wrests from the *vis medicatrix nature* the credit of the cure. If the patient dies its all right, they are satisfied that the disease was incurable, and they have only to scare away the Bad Spirit who is hovering around to seize the soul ready to depart. This is accomplished by the most infernal din, firing of guns, beating drums and howling, in which all join.

Should the patient die in the family lodge, it is invariably burned, and a new one erected. When death is anticipated the patient is removed to a small lodge constructed for the purpose. So, also, a squaw in confinement is left alone in a small lodge, also during the menstrual period the woman is separated from the family, and is not allowed to use any of the vessels for culinary purposes used by the family until after purification by water, to which they resort immediately after the flow ceases.

From observation and what I could learn from the very aged Indians, syphilis is a modern disease. Among the very aged Indians or squaws there are no indications of ever having suffered from it. The younger Indians show the sequelæ of the disease in all its Protean forms.

At a treaty held with the Winnebagos at Turkey River, Iowa, in 1845, Old Gull, a very aged chief, made a very feeling speech, bemoaning the condition of his tribe, in which he said "When I was a boy adultery was rarely known among the women, but now the Winnebagos are a nation of whores, and that place" [pointing to the Mission school-house] "is the place where they were made." And from my own observation I think the old chief was right in his assertion.

Owing to the filthy habits of the Indians syphilis is a much more loathsome disease than among the whites. For it they have no remedy. Gonorrhœa, for the same cause, is a serious disease among them, and very common. For this they have a remedy obtained from the different varieties of pine. They peel the bark and scrape off the juice between the bark and wood, which I think is quite as efficient a remedy as the balsam copaiva. They also use the buds of the balsam of Gilead, an infusion.

I expect shortly to visit Forts Hale and Randall, on the Sioux reservation, and will get what information I can from the old employes as regards these points, and if I obtain anything worthy of remark will write you again.

Respectfully,

F. ANDROS

FOREIGN CORRESPONDENCE

LONDON, Sept, 1883

Among the numerous changes that have taken place during the past year in the various staffs of our medical schools, Dr Blaxton Hicks has retired from the office of obstetric physician at Guy's and been appointed a consulting medical officer. Mr Johnathon Hutchinson has become one of the consultants at the London hospital, but will continue to give clinical instruction at intervals. Dr Burdon Sanderson leaves University College for Oxford, where he takes office as Waynflete Professor of Human Physiology and Histology. In the University of Cambridge Dr Michael Foster takes the newly created professorship of Physiology and Dr Humphrey that of Surgery. Dr Southey resigns his office of Physician at St Bartholomew's in favor of his new appointment as a Commissioner in Lunacy.

A new evil is becoming known to the profession here, taking the name of "Lawn Tennis Elbow" from its being acquired during the pursuit of that popular game. Dr Henry Morris says it is due to sprain of the pronator radii teres muscle and the fascia and inter muscular septum on the inner side of the humerus, from which its greater head arises, by the rapid and forcible pronation of the forearm which constantly takes place in lawn tennis. The treatment necessarily is rest and support of the affected joint.

Those members of the Meteorological Society of Scotland and the Edinburgh Royal Society with Mr Murray, of "Challenger" fame, will deserve the thanks of the scientific world if they succeed in establishing the "Edinburgh Marine Station for Scientific Research." They propose to acquire some disused quarries at Granton, fill them with water from the Firth of Forth and maintain an extensive and varied series of biological investigations. They will also institute a very complete series of observations on the temperature of the surface water, and of the bottom and intermediate waters at fixed points of the Firth, and at stated intervals throughout the year. The station will be provided with a steam pinnacle, fitted for dredging purposes and the making of hydrographic observations. The committee entrusted with its organization are quite confident, it appears, of their efforts being attended with success.

It is suggested that the Collective Investigation Committee should, in view of the increase of cancer, allow it to form one of their subjects of inquiry.

The authorities have at length abolished the old "military seat" in the cavalry. In future the men will be allowed to rise in their stirrups in trotting. No doubt there will be found a great decrease in the number of invalids due to hernia and affections of the veins.

A coronor's inquest has been held upon Marwood the public executioner as reports were current that his death had been brought about by the Irish "Invincibles," and that poison had been administered through the agency of the medical attendants. The evidence showed that the lungs presented symptoms of pneumonia, in conjunction with disease of the

liver and kidneys, the stomach having the appearance of that of a man who had been addicted to drink. In a pathological point of view there was little or nothing of importance. The medical men received an expression of sympathy from the coronor and jury for any annoyance that might have been caused them, but the reports having found their way into the public press and had become of public interest, and an inquiry was due for their own sakes and the profession at large.

The jury on the inquest on the body of one of those killed in the late fatal fire at the Southall Park Asylum have appended to their verdict a rider "that the laws which give power to confine lunatics should provide efficient means for their protection from fire." It is to be sincerely hoped that this expression of opinion will be the means of every possible contrivance being taken to avert any recurrence of such an appalling catastrophe.

At the last meeting of the Cambridge Medical Society an interesting case of unusual rapidity of the heart's action was related as occurring in a lady aged 34, married. The attacks came on suddenly after fatigue or exhaustion, with pain over the præcordia and palpitation. During the attack the pulse could not be counted at the wrist, and the number of the heart's beats counted with the stethoscope, was about 196 per minute. The paroxysm usually terminated suddenly, the pulse going down to about 76, vomiting occasionally took place afterwards. The attack would sometimes last not more than twenty-four hours. At first the treatment was digitalis. This was ineffectual. Bromide of potassium and valerian were useless. Hypodermic injection of morphia, $\frac{1}{16}$ of a grain, night and morning was then tried. The patient slept part of a night and the palpitation ceased about five in the morning. It was regarded as a case illustrating the gastronic system passing beyond the control of the cerebro-spinal.

Sir Edwin Saunders, the newly knighted dentist to the Royal family, has given some property adjacent to the London Dental Hospital to that institution, so that it may be enlarged.

BOOK REVIEWS

TRANSACTIONS OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA, VOL VI, 1883

Most of the papers in this volume have appeared in print, either in full or in abstract, elsewhere. They are therefore already familiar to many. Their chief characteristic is their excellence. In the limits of this brief notice we can merely enumerate the papers that are collected in this volume, and call especial attention to one or two, not because so much better than the others, but because they have attracted our own attention more particularly.

The first article is a "Report of the Committee on Meteorology and Epidemics for the Year 1880," by R. A. Cleeman. Then follows "A Case of Fungosities of the Bladder, Cured by Scraping with the Finger, With Some References to the Literature of the Subject," by W. F. Atlee. "Two Cases of

Congenital Irideremia, with Lamellar Cataract in One and Dislocated Cataractous Lenses in the Other, by Geo C Harlan "Report of a Case of Malaria in a Child, aged 20 months, in which Morbid Enlargement of the Liver and Spleen Occurred, also a Case of Aortic Stenosis and Regurgitation, with Atheromatous Aorta, in a Woman aged 103," by John M Keating "Observations on Catarrhal Fever," by J M DeCosta "Cases of Poisoning from Drinking Impure Water," by J H Hutchinson "Remarkable Case of Sacculated or of Circoid Aneurism of the Second Interosseus Branch of the Deep Palmar Arch Treated by Excision," by John B Roberts "Report of Three Cases of Abscess of Brain," by J T Eskridge "Tenosynovitis Its Cause, Nature, Symptoms, and Treatment, Based upon an Analysis of Fifteen Cases, by W B Hopkins "The Presence of Micrococci in the Blood of Malignant Measles, Its Importance in Treatment," by J M Keating This paper gives the history of microscopic examinations of the blood of cases of measles that occurred during an epidemic in the Children's Asylum of the Philadelphia Hospital. Micrococci are to be found in blood taken from the measles papule in ordinary or mild cases. But is not present in the general circulation or in the blood taken from the end of the finger. In his microscopical examination Dr Keating was assisted by Dr Formad "The microscopic examination of the blood showed the constant association of micrococci with the general manifestations of malignancy (a condition already well known), and the gradual but positive amelioration of all bad symptoms by treatment which was directed to the micrococci, as the fons et origo of trouble was evident (this I believe for the first time exhibited)" "The moment that symptoms of malignancy—viz, dark eruptions, ill-defined crescents, delayed and imperfect appearance of the eruption, with feeble circulation, high temperature, and pharyngeal false membrane appear, the examination of the blood showed micrococci in abundance in the field. We find that they develop with activity when the blood-current is retarded, hence we find them spread throughout the heart-clot itself, possibly at times having been here arrested by the obstruction of the flow caused by the heavy congestion, known as a frequent complication of these cases, and finally aiding by a mechanical cause alone the deposition of fibrine that forms the clot. They act upon the white blood-corpuscles, destroy it in all probability, or, at least, as one of the cases proves conclusively, prevent its change to red corpuscles, and thus the oxygen carriers being either destroyed or reduced in numbers with none to replace them, the tissues retain their detritus for want of carriers to relieve them and another factor is added to increase mortality. I asked Dr Formad what, in his experience, most readily checked the development of micrococci in his culture solutions, obtained from erysipelas, diphtheria, etc, he answered, alcohol Carbonate of ammonia and digitalis were at once withdrawn from the treatment for the future, and whisky substituted. Five children had already died, and the sixth presented in the symptoms that ex-

perience had shown indicated commencing heart-clot. Three ounces of whisky were given in the next twelve hours in frequent small doses. No micrococci had penetrated into the corpuscles in this case. It recovered.

The next article describes "A case of Cervical Lymphadenoma, treated by the application of earth" By A Hewson "The Bacillus Tuberculosis" by James T Whittaker. This is an excellent lecture in which the history of the discovery of bacillus tuberculosis is given, also its characteristics and a very clear explanation of the methods of displaying it. The next paper is one of much interest on "Clinical Observations on Albuminuria, based upon a Study of Sixty-two Cases seen in Private Practice," by A V Meigs "Autopsy of a Case of Transposition of the Viscera," by H A Wilson "Flexible Gelatin as a Substance of Adhesive Plaster," by A Hewson, "Report upon a Specimen of Xanthic Oxide Calculus," by W W Keen "A Resume of twenty-five Cases of Abdominal Section," by J E Mears "Heart-Puncture and Heart-Suture as Therapeutic Procedures," by J B Roberts "Observations on the Management of Enteric Fever, according to a Plan Based upon the So-Called Specific Treatment," by J C Wilson "Arsenical Paralysis," by C K Mills "A Partial Study of the Poison of Heloderma Suspectum," by S W Mitchell and E T Reichert "The History of a Case of Abdominal Cystic Tumor where Seven Years after Removal of the Tumor by Laparotomy a Second Operation was Demanded Tapping through the Vagina resorted to, with Consequent Death of the Patient," by W F Atlee "Sewer Gas and its alleged Causation of Typhoid Fever," by Geo Hamilton. In this Dr Hamilton opposes the prevalent theory of the causation of this fever by sewer gas. The article is of considerable interest, especially to those who have been paying particular attention to this subject. Next follows an elaborate article on "Tubercular Cerebro spinal Meningitis," by J T Eskridge "Does Excision of the Larynx tend to the Prolongation of Life?" by J Solis Cohen "Report of a Case of Resection of the Radius, performed by J A Barton in 1828," by W B Hopkins "Infant Foods," by A R Leeds "The Relation of Pain to Weather," Studied during Eleven Years in a Case of Traumatic Neuralgia by C R Catlin, with notes by S W Mitchell "A Clinical Study of the Cranial Nerves," by H Allen. The next two and last papers have already been given in abstract in this journal. They are on "Some Observations on the Salivary Digestion of Starch by Infants," by J M Keating, and "A Note on the Fæces of Starch-Fed Infants," by N A Randolph.

The volume contains in addition to these valuable articles the remarks that were made by members of the college when they were read.

NECROLOGY,

MUSSEY, WILLIAM HEBERDEN, M D, of Cincinnati, Ohio, was born in Hanover, N H, Sept 30, 1818, and died of apoplexy, at Cincinnati, Ohio, Aug 1, 1883. Overwork was supposed to be the cause. During the hot weather he was pushed with professional business beyond endurance, as his partner was absent taking his summer vacation, Dr Mussey was left alone to do all his work. On the last day of July he was conversing with a patient at his office. He complained of being very tired, and in a moment more he said his head troubled him. He sent for water, and attempted to go to an easy chair, but could not, and asked to be layed on the floor. With this he became insensible, and physicians were sent for in all directions, and soon arrived. Word was sent to his family, and an ambulance summoned from the hospital. About 6 P M he was removed to his residence at Mt Auburn, two miles or more from his office, where, unconscious, the next day he died, literally "in the harness." William H Mussey's parentage was honorable and honored. His father Prof Reuben D Mussey, was of French extraction, and his mother of English. Her maiden name was Hitty Osgood, a lady cultured, kind, gentle and beloved by all. Quite a number of Dr Mussey's paternal ancestors had made the study and practice of medicine their pursuit. The father, Dr R D Mussey, was eminent as a surgeon in New England, and afterward at Cincinnati, holding the Chair of Surgery at both places. He was not only distinguished as a teacher and skillful practitioner of conservative surgery, but as a profound thinker and benevolent Christian gentleman.

Wm H Mussey, in boyhood, as his old fellow-student, Mr H C Lord, writes, "was a close and diligent student, always kind and indulgent to his playmates, and looked up to by them, as boys always respect an elder one who respects himself and influences them by his own example. He was a religious and devotional boy. Although at times impatient and irascible under opposition, he was quick to forgive and always as quickly forgiven."

Dr Mussey's literary and classical education was received in New England academies. After removal, with his father, to Cincinnati, for a short period he was engaged in mercantile pursuits, which did not suit his taste. Away flew his yard-sticks and books of account, inheriting from his great father an in-born love of the practice of medicine and surgery, he entered his office, a student and a devotee. He was again at home, in the noblest sense of the word. Into that office he brought with him the ambition of youth—a natural aptitude, the tenderness of his mother as well as the will and concealed wit and humor of his grave and apparently stern father.

Dr Mussey pursued his regular professional studies with his distinguished father, and the usual curriculum of the Ohio Medical College, where he graduated in 1848. After this he spent one or two years in Paris, observing the treatment and operations of the most eminent physicians and surgeons in France. On returning to Cincinnati he was associated with his

father, making surgery a special part of his professional career. In this department he made an enviable and well-earned success, both as teacher and practitioner. In 1865 he was chosen Professor of Surgery in the Miami Medical College, and with honor and general satisfaction he continued in that position until his demise. He always applied himself to the study and practice of surgery since he embarked in his profession. He was a conscientious, careful, scientific and successful surgeon. In whatever situation he was placed he was ready for the emergency. Although in general following the old, well-tried paths of illustrious predecessors, he at times with keen perception and inventive genius marked out for himself a new departure from the common routine practice. Dr William H Mussey was a member of the City and State Medical Societies, in which he took an active part. The writer has observed him, in the committee room, as elsewhere, display a marked executive ability. He was a member of the American Medical Society of Paris, and of the American Medical Association, of which he was one of the vice-presidents in 1864. He received the honorary degree of Master of Arts from Dartmouth College, N H, after he had become distinguished in his profession. Dr Mussey was associated with his father in practice at Cincinnati until the latter retired from business. On the war of the rebellion, when on the arrival of the intelligence of the firing on Sumpter, he immediately sought and obtained permission from Secretary Chase to establish a volunteer army hospital in Cincinnati. This he accomplished by occupying and furnishing the Marine Hospital on Lock street. He raised the necessary funds by private contributions, organized the hospital under the necessary boards of management, brought it into effective working condition, and at the end of three months turned over to the United States Government the first, and one of the best volunteer hospitals the country possessed during the entire war.

He was subsequently called upon by the parent organization to establish the Cincinnati branch of the United States Sanitary Commission, which he did most successfully. He then offered his services as surgeon to the Government gratis, as long as the war should last. His offer being refused, he repaired to Washington, was examined and commissioned as Brigade Surgeon, with the promise that he should assume the charge of the hospital he had founded in Cincinnati.

After visiting home he was ordered to the front as Medical Director of a Division in Gen Buel's army. He joined the forces in the field and served in the battles of Pittsburgh Landing and Corinth. He was then promoted to Medical Inspector with the rank of Lieutenant Colonel in the United States Army. After serving at the second battle of Bull Run and the battles of Antietam and Fredericksburg, he made a tour of inspection, during which he inspected every regiment from Washington to Florida. In the various military duties assigned to him he was considered one of the most efficient medical officers in the service.

Dr Mussey was a large

general public placed implicit trust, knowing that he was truthful, deliberate and conscientious. He was Surgeon of the Cincinnati Hospital, St John's Hotel for Invalids, St Luke's Hospital and President of the Cincinnati Society of Natural History. In all these positions he gave universal satisfaction. Although much of his valuable experience is unrecorded, yet he contributed a few papers to medical societies and periodicals which manifested the vigor of a fertile, cultured brain.

Dr Mussey took a lively interest in the collateral sciences and general literature. He was a member of the Board of Education, and at one time donated to the public library of the city more than five thousand volumes as a nucleus of the "Mussey Medical and Scientific Library," a memorial of his distinguished father. He took great delight in conversation, debate or lectures to allude to the practice and precepts of his father. His benevolence and charities were commensurate with his abilities. He was essentially unselfish—he lived for others. He was an elder in the Presbyterian church for many years, trusting in the merits of his Saviour he died in charity with all.

In 1857, Dr Wm H Mussey was married to Miss Caroline W Lindsly, of Washington, D C. She still survives. They had two children—a daughter who died in early infancy, and a son, Wm Lindsly Mussey, who is still living and studying medicine. His domestic relations of a quarter of a century were pleasant and agreeable. The mortal remains of this eminent, intelligent and good man were deposited in Spring Grove cemetery in the presence of dear, weeping relations and numerous friends.

JOHN W RUSSELL, M D, of OHIO

PELTON, LOUIS F, M D, of Mount Kisco, Westchester county, New York, was a native of Bradford, in the same county, died at his residence, Sept 17, 1883. He was in active practice for over 25 years. For many years Dr Pelton was President of the Board of Education of Mount Kisco, and held other offices within the gift of his neighbors. He was one of the active spirits in organizing and conducting the Bradford Farmers' Club. He was also a member of the Westchester County Historical Society, and a member and at the time of his death one of the censors of the Westchester County Medical Society, a member of the American Medical Association since 1864. During the war, Dr Pelton was one of the examining surgeons under the Provost-Marshal of the district. He had also been coroner, and a member of the Board of Supervisors for Westchester county. He leaves a widow, one son and one daughter.

J M T

MIXER, SYLVESTER FREDRICH, M D, of Buffalo, New York, was born at Morrisville, Madison county, N Y, Dec 27, 1815, died at his residence in Buffalo, Sept 17, 1883. He is descended from English settlers in New England. Having prepared himself for a study of medicine, he attended lectures and graduated in medicine at Yale College in 1841, and the same year settled to practice in Buffalo. After

practicing for six years, he went to New York, and attended a course of lectures at the College of Physicians and Surgeons, and in 1847 received the degree of M D. He was studious and observing, and acquired skill and reputation in his profession. He was an active member of the Buffalo and also of the Erie county Medical Societies, and a member of the American Medical Association since 1850. From 1858 to 1874 Dr Mixer was attending physician to the Buffalo City Hospital. On retiring from the position of regular attending physician, he was elected on the counselling board, which position he held at the time of his death. In 1858, Dr Mixer was married to a daughter of Dr Perrin Knowlton, of Cincinnati, Ohio, who survives him.

J M T

LEAL, JOHN ROSE, M D, was born at Meredith, Delaware Co, N Y, on the 20th day of October 1825, died of peritonitis at his residence in Paterson, N J, August 28, 1882. His father, John Leal, and mother Martha McLaury, were both descended from first settlers in that county. His great-grandfather, Alex Leal, being born in Scotland in 1740, sailed from there on August 12, 1773, and landed in New York on April 13, 1774, and immediately located in Delaware Co. The doctor received his preliminary education at the Literary Institute, Franklyn, Delaware Co, and at the Delaware Academy at Delhi. He read medicine under the direction of Dr Almiran Fitch, of Delhi, who was reputed to be one of the first physicians and surgeons of Delaware Co, and graduated at the Berkshire Medical College, Pittsfield, Mass, in the year 1848, afterward supplementing the store of knowledge by a post-graduate course at his College of Physicians and Surgeons, New York City. He located at Andes, Delaware Co, where he married a daughter of Rev James Laing, in 1856. He continued in this locality, with satisfaction to his patrons and credit to himself, until the year 1862, when he was appointed surgeon of the 144th Regiment, N Y Volunteers. He received several promotions, being made brigade, division, and corps surgeon in turn, and at one time he was medical director in the department of the south. After the war, he recommenced the practice of his profession at Purdy, Westchester Co, N Y, but finding that the practice, which necessitated a great deal of riding, was taxing him too severely, on account of his health not being good, the result of injuries and diseases incurred during his army life, he removed to Paterson, N J, in 1867, at which time the writer of this sketch became acquainted with him and remained intimate with him till the time of his death, which resulted from an attack of peritonitis of an asthenic character, sequel to an attack of dysentery, which at the onset did not indicate an unusual degree of severity, but was undoubtedly aggravated by the chronic diarrhoea from which he had been a sufferer more or less constantly since his retirement from the army. The doctor remarked to me, when I said that I hoped soon to see him about, that there was an old trouble there. The doctor was of a genial and cheerful disposition, always ready to respond to the call of

suffering humanity, though suffering himself The doctor was a man of strict integrity, always as regardful of the rights of his professional brethren as of his own He was universally respected by his colleagues, and commanded the confidence of his patients, to whom he was always a faithful servitor, exercising judgment and skill in the management of those coming under his charge

The doctor united with the Presbyterian church in Andes under the ministration of Rev Duncan C Niven, and on his removal to Paterson joined the First Presbyterian Church, with which he remained connected up to the time of his death He leaves a widow and two sons to mourn the loss of a Christian husband and father

C S VAN R

Furnished by B A Watson, M D

TUCKER, GEORGE GREENVILLE, M D, of Westfield, Mass, was born at Warrën in 1834, died suddenly of heart disease, and was found dead in his bed, Monday morning, August 20, 1883 His medical degree was taken from Harvard University in 1855 He also passed two years in the Massachusetts General Hospital After a year in private practice he went to London, Paris and Vienna, where he continued his studies On his return to his home he settled to practice in Westfield, where he acquired a good business and reputation In 1861 he was united in marriage with Miss Langdon, granddaughter of the late Abner Post Doctor Tucker was a member of the Massachusetts Medical Society, and of the American Medical Association since 1865 His demise was unexpected, as he attended to his patients as usual the day before his death He was widely known and much respected

J M T

MOSHER, JACOB S, M D, of Albany, N Y Was born in the town of Coymans, Albany county, N Y, March 19, 1834, died suddenly of heart disease at his residence, August 15, 1883 He graduated A M from Rutgar's College in 1853 His medical degree was obtained after regular course at Albany Medical College in 1863 Early the next year he entered the military service as a volunteer surgeon, serving in the Army of the Potomac, which was then investing Petersburg and Richmond He was fully occupied there and in the hospitals at Washington until the close of the war While still in the service he was appointed Assistant State Medical Director for the State of New York, on duty at Washington, which detained him there until 1867 Returning to New York, he was appointed by Governor Hoffman Surgeon General of the State, which position he filled acceptably until the accession of Governor Dix In 1870 he was appointed Deputy Health Officer of the port of New York, and served at quarantine until 1876 At the close of this six years of arduous duty he made a visit to Europe, visiting and studying society and hospital management in England and on the continent

Returning home, he settled down to the earnest pursuit of private practice, the ambition of his life and for which he was by study and natural gifts eminently qualified to occupy a front rank He was an

active member of the State and County Medical Societies, and in 1872 was sent as a delegate to the American Medical Association In 1863 he became a member of the Albany Academy, and was Professor of Chemistry and Medical Jurisprudence from 1864 to 1870 in the Albany Medical College From 1865 to 1868 he was a member of the Board of Public Instruction, a position in which he did good service He was also a member of the Albany Institute, and of the New York Academy of Medicine Dr Mosher was married December 20, 1863, to Emma S, daughter of the late Jesse Montgomery, Esq, of Albany, by whom he had four children She died in 1879 Three children survive The Doctor had been working close in full and responsible practice, and had arranged to leave for a few weeks' recreation on the following day Death overtook him in the prime of life and in the midst of his usefulness He retired to bed after 12 o'clock, and was found dead in his bed in the morning, as in a peaceful sleep

PIERSON, WILLIAM, Sr, M D, born in Newark, N J, December 4, 1796, died October 1, 1882 He graduated at Princeton College in 1816, the highest honors being equally divided between himself and his brother, the late Rev Albert Pierson

Dr Pierson married Margaret Riker, daughter of the late Dr Hillyer, she died in 1853 Six children were born of this marriage, of whom three survive Dr Pierson was descended from one of the early settlers of Newark Four generations of his ancestors had practiced medicine in the vicinity He attended medical lectures at the University of Pennsylvania, and was licensed to practice medicine by the Medical Society of New Jersey in 1820 He then entered upon his professional work, being associated with his father until the death of the latter in 1833 He was secretary of the State Medical Society for thirty years, and upon resigning in 1866 was elected Third Vice President, and in 1869 President He was a successful practitioner, as well as beloved and esteemed for his virtues as a man, by all with whom he came in contact Outside of his profession he held many civil offices, never courting them, yet never hesitating to serve in any capacity in which the people saw fit to place him He was a member of the State Legislature in 1837-38, Director of the Board of Freeholders and Sheriff of Essex Co in 1849-51, first Mayor of Orange, serving three consecutive years, 1860-63, and member of the Common Council for the three following years He was active in every improvement for the advancement of the city's interest, and also interested himself in several benevolent and industrial institutions

Resolutions by the Essex District Medical Society

Resolved, That we tender our cordial sympathies to the family of our deceased brother in their affliction, and that we will attend his funeral as a society

Resolved, That this minute and these resolutions be published in the papers, and be communicated to the family of the deceased by the Secretary

Furnished by B A Watson, M D, of New York

SCHENCK, JOHN V, A M, M D, was born in Middlesex county, near Brunswick, N J, in 1825, and died at Atlantic City, N J, July 25, 1882. His family was one of the oldest in the State. He graduated at Rutgers College in 1845. He received the degree of M D from the Medical Department of the University of Pennsylvania in 1849. After practicing a short time in his native county, he located in the city of Camden, where he continued during the remainder of his professional career. He was noted for his learning, courtesy, soundness of judgment and kindness of heart. He was a member of the City, County and State medical societies, and was president of the latter in 1876, and of the Americal Medical Association in 1858.

A M

Furnished by B A Watson, M D

MISCELLANEOUS

AMERICAN MEDICAL DIPLOMAS ABROAD —Australia seems to be peculiarly favored just now with bogus diplomas from the United States. The *Australian Medical Journal*, of June 15, tells us that the Medical Board of Victoria has recently refused to register a Rev R V Danne, who presented a diploma from the Medico-Chirurgical College of Philadelphia, which Mr Danne said had only been in existence two years or thereabouts. A translation of the diploma is given, as made by one of the best classical scholars in the colony, which is interesting reading. Among other things, it declares the holder to have passed all his examinations in jovial fashion (in more jucundo). The translator expresses his appreciation of it by saying "It is hideously bad Latin, and there are grammatical blunders in it for which a little school-boy would be soundly whipped."

AMERICAN ACADEMY OF MEDICINE

PHILADELPHIA, September 26, 1883 —DEAR SIR The American Academy of Medicine will meet at the New York Academy of Medicine, on Tuesday, October 9 (three o'clock), and Wednesday, October 10. The address by Dr H O Marcy, of Boston, Mass, President, will be delivered on Tuesday evening, October 9, at eight o'clock, on "The Recent Advances of Sanitary Science, the Relations of Micro Organisms to Disease" (illustrated by microphotographs projected upon the screen).

The following papers have been promised for the general meetings:

Dr L S Pilcher, of Brooklyn, N Y, on "The Relations of Medical Journalism to Higher Medical Education in America."

Dr Traill Green, of Easton, Pa, on "The Imperfection of Technical Studies as a Means of Mental Culture."

Dr Benjamin Lee, of Philadelphia, on "The Value of an Acquaintance with Botany as a Preliminary to the Study of Medicine."

Dr Charles McIntire, of Easton, Pa, "Is it Fair?"

The Study of the Comparative Political Position of the Medical Profession in the United States."

Dr A D Rockwell, of New York, on "The Exact Value of the Electrolytic Method."

Dr J Cheston Morris, of Philadelphia, "The Milk Supply in Large Cities."

Dr Charles E Cadwalader, of Philadelphia, "Considerations Upon the Public Provisions for the Care of the Indigent Insane."

Dr A D Rockwell, of New York, "The late Dr George M Beard, a Sketch."

Report of the Committee on Laws of Medical Practice in the United States and Canada (Drs Dunglison and Marcy).

Yours respectfully,

RICHARD J DUNGLISON, M D,
Secretary

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U S ARMY, FROM SEPTEMBER 21, 1883, TO SEPTEMBER 28, 1883.

DeLoffre, A A, Captain and Assistant Surgeon, assigned to duty at Fort Niagara, N Y (par 5, S O, 182, Department of the East, September 27, 1883).

Harvard, Valery, Captain and Assistant Surgeon, assigned to temporary duty at post of San Antonio, Texas (par X, S O, 120, Department of Texas, September 21, 1883).

Reed, Walter, Captain and Assistant Surgeon, relieved from duty at Fort Omaha, Neb, and assigned to duty as Post Surgeon, Fort Sidney, Neb (par 5, 3, O, 103, Department of the Platte, September 22, 1883).

Shannon, W C, Captain and Assistant Surgeon, assigned to duty at Fort Bridger, Wyoming (par III, S O, 102, Department of the Platte, September 19, 1883).

Appel, A H, First Lieutenant and Assistant Surgeon, assigned to temporary duty at Fort Warren, Mass (par 3, S O, 181, Department of the East, September 25, 1883).

Carter, W F, First Lieutenant and Assistant Surgeon, assigned to temporary duty at Washington Barracks, D C (par 5, S O, 182, Department of the East, September 27, 1883).

Richard, Charles, First Lieutenant and Assistant Surgeon, relieved from further duty at Creedmoor, New York, to return to his proper station, Fort Adams, R I (par 1, S O, 180, Department of the East, September 24, 1883).

Richard, Charles, First Lieutenant and Assistant Surgeon, granted leave of absence for two months, with permission to apply for extension of two months (par 1, S O 49, Military Division of the Atlantic, September 25, 1883).

Wakeman, William J, First Lieutenant and Assistant Surgeon, relieved from temporary duty at Fort Sidney, Neb, to join his proper station at Fort D A Russell, Wyoming (par 5, S O 103, Department of the Platte, September 22, 1883).

Philadelphia, December 22d, 1882

An analysis of seven samples of Quinine Pills, obtained without knowledge of the manufacturers, was made and published in the American Journal of Pharmacy by me, and those made by WILLIAM R. WARNER & Co. were found to be correct as to quantity and purity of Quinine

HENRY TRIMBLE,

(Analytical Chemist)

PIL: CHALYBEATE



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UNIVERSITY OF PENNSYLVANIA

DR F A GENTH
CHEMIST

West Philadelphia, January 24th, 1883

I have analyzed the Sulphate of Quinine Pills manufactured by Messrs WILLIAM R. WARNER & Co, and those purporting to contain, according to the label, two grains, I found to contain fully two grains of Sulphate of Quinine in each pill

F A GENTH

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MURPHY, Gynecology (Associate) DONLAND, Therapeutics HOBBS and
BATES, Anatomy TALBOT, Dentistry For announcement address
Prof. D. W. GRAHAM, 101 Warren Ave. Sec. y

DENVER MEDICAL COLLEGE

MEDICAL DEPARTMENT
UNIVERSITY OF DENVER, COLORADO
SESSION OF 1883-84

Regular session of 1883-84 will open October 2, 1883, and close March 26, 1884. Enlarged clinical advantages will be afforded, and it will be the aim of the Faculty to make the course as practical as possible. For circulars and other information, address the secretary,

DR. J. H. KIMBALL,
Steele Block, Denver, Colo

CHICAGO MEDICAL COLLEGE.

Medical Department of the Northwestern University Sessions of 1883-84

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The clinical advantages of this College, with the great number of Dispensary, College Clinic and Hospital patients cannot be surpassed. All professors of practical branches are members of the staff of Mercy or St. Luke's Hospital, or other charities. For several sessions each senior student has had the privilege of attending upon one or more obstetrical cases and of witnessing important obstetrical operations.

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DR. D. A. K. STEELE, SECRETARY,
1801 State St., Chicago, Ill.

— THE —

Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY

VOL I

SATURDAY, OCTOBER 13, 1883

No 14

ORIGINAL ARTICLES

REPORT OF THE COMMITTEE ON PRACTICAL MEDICINE AND EPIDEMICS, OF THE ILLINOIS STATE MEDICAL SOCIETY FOR 1882-3

BY N. S. DAVIS, CHAIRMAN OF THE COMMITTEE READ
AT THE MEETING IN PEORIA, MAY 15, 1883

[From Advance Sheets of the Transactions of the Illinois State Medical Society.]

The By-laws of this Society make it the duty of the Standing Committee on Practical Medicine to report annually concerning such improvements as may have been made during the year in the management of individual diseases, and on the prevalence and special character of epidemics in all parts of this State.

Improvements in the management of any given disease may arise, either from a better knowledge of its causes, a more accurate understanding of its special pathology and tendencies, a more perfect comprehension of the action of remedies, and from direct clinical experience or observation at the bedside of the sick. By a full knowledge of the causes capable of producing a disease, the physician is often able to direct such remedies, or adopt such hygienic measures, as will neutralize or suspend their further operation, very much to the relief of his patient.

The more exact is our knowledge of the morbid processes constituting a disease, and of the tendency of those processes in developing the changes which we designate as the stages of the disease, and in secondarily disturbing other important functions, the more accurately and effectually can the physician select and apply his remedial agents for arresting or modifying those processes. In like manner, every addition to his knowledge of the action of remedies in the human system enables him to adjust their administration to the actual indications presented in the different stages of disease with more precision and effect.

And yet, when speaking of improvement in the treatment of diseases, we are quite prone to think of such items, only, as the discovery of some new remedy, some new and important application of an old one, or the development of some new methods in hygienic or other management.

It is obvious, however, that no adequate idea can be had of the real progress made in the management of disease, without taking the very comprehensive view just indicated. And in looking for evidences of

improvement in the department of practical medicine during the preceding year (1882), I shall include the subjects of etiology and special pathology, as well as that of the direct treatment of disease. During the past and several preceding years, investigations in the field of etiology, or the causes of disease, have been pushed with great activity, partly on account of their bearing on the sanitary interests and regulations of communities and nations, and partly from the intrinsic scientific interest the subject creates in the minds of the investigators themselves. The active investigations in this field have been chiefly in two directions, namely—the use of the microscope in studying the blood, the structures, the secretions, deposits, growths, and all other morbid products, for the purpose of discovering any organic germs that may exist in them, and, if possible, of determining their causative relations to the diseases with which they are found associated, and a more extended and systematic study of meteorological and topographical conditions in their relations to the prevalence of diseases. Researches in the first direction, with the highest magnifying powers, aided by all the devices that modern science can afford, and prosecuted by a large number of skillful investigators, have resulted in the discovery of some form of bacterial development in the blood and tissues of many acute general diseases, and in almost every form of morbid product thus far subjected to examination. With that tendency to hasten generalization, or the drawing of conclusions from too limited a number of established facts—characteristic of our profession—each new germ discovered has been regarded as *the cause* of whatever disease or morbid product it was found associated with, until “*germ theories*” of disease, and “germicide remedies,” have come to occupy the most prominent place in the medical literature of the present time, and men qualified for the task, could confer no greater benefit upon our profession, and, through it, upon the people of all classes, than to subject the whole field of what may be styled antiseptic surgery, germ etiology, with germicide therapeutics, and antiseptic sanitation, to an impartial and rigidly logical investigation, by which really *established facts* should be separated from partial or incomplete observations, the true relations of cause and effect maintained, as distinguished from mere coincidences, and the special additional investigations required to supply the facts or data needed to render much that has already been done available for the deduction of conclusions of either scientific or practical value.

It is not within the province of your committee, however, to attempt such a task, but simply to call your attention to such developments in the department of ætiology during the past year, as have a practical bearing on the treatment of disease. Perhaps the most important of these developments, and that which has occupied much of the attention of skilled microscopists, as well as the profession at large, during the past year, is that relating to the *bacillus tuberculosis*, first announced by Koch as the special microphite, or germ, peculiar to tubercular disease. With much care and patient observation Koch demonstrated the existence of this particular bacillus, or germ, in the tubercular masses deposited in the lungs and in the sputa of phthisical patients, and then by cultivating or propagating the bacilli, and using them to inoculate small animals, found such inoculations to be followed by the development of tubercular disease in a large proportion of the inoculated animals. So far as relates to the existence of the bacilli in the tuberculous deposits and in the sputa of patients affected with pulmonary tuberculosis, the observations of Koch have been fully confirmed by other skilled observers, both in this country and in Europe. But the results obtained from attempts to propagate the germ, and demonstrate its causative or ætiological relations, have been so various and contradictory as to leave this part of the investigation incomplete. By some it is claimed that the bacilli of Koch have been found only in such pulmonary tubercles as were exposed to the inhaled atmosphere and in the sputa. But Dr Belfield, of Chicago, claims to have found them in tubercular deposits from mesenteric glands, and Dr H. Gradle, of the same city, in a paper to the Chicago Medical Society recently, claimed the ability to demonstrate their presence in all varieties of tubercle, so certainly as to constitute the most reliable means of establishing an early and reliable diagnosis. Such claims, however, cannot be received until they have been confirmed by a much greater number of accurate observations. The discovery of bacilli in the tubercular masses and sputa of tubercular subjects has been construed as affording positive evidence that phthisis is an infectious disease, directly dependent upon these organic germs as its efficient cause, and capable of being propagated from one individual to another through their agency.

The very important practical bearing of such inferences is apparent to all of you. If we assent to the inference that tubercular consumption is an infectious disease, and that the specific infection in the form of bacilli, exists in the sputa and breath of patients affected by it, the practical questions concerning the *isolation* of all such patients, and their treatment mainly by antiseptic and germicide remedies, at once assume an importance superior to all others. But the mere fact that the bacilli or any other bacterial forms, are present in the substance of tubercle and in the sputa of tuberculous patients, justifies no such inference. Neither have the results of cultivation and inoculation with these germs been sufficiently uniform or successful to afford any corroborative evidence in favor of their infectious

properties and ætiological importance. On the contrary the frequent failure of such experiments, and the close resemblance of Koch's bacillus tuberculosis to the bacillus cadaveris, found abundantly in the tissues of every cadaver left in a moderately warm atmosphere twenty-four hours after the death, renders it highly probable that both are mere accompaniments of certain deteriorative changes in organic matter, and possessing no causative relations whatever. This view is further sustained by two well-known and long-established clinical facts. First that neither physicians nor nurses who daily examine and wait upon consumptive patients, either in the wards of hospitals or in private dwellings, afford any evidence of becoming infected, or of yielding any higher ratio of cases or deaths from the disease than other classes in the community not so exposed to contact with the sick; second, that no disease in the long catalogue of human ailments affords stronger evidence of capacity for hereditary transmission than tuberculosis. There is, therefore, nothing in the present status of investigations on this subject that will either justify the isolation or quarantining of the victim of tuberculosis, the prompt disinfection of his sputa, or the expectation of curing him by the use of germicides.

These remarks apply equally well to nearly all the other diseases with which some variety of bacterial germ has been found associated. And yet a very large proportion of the ætiological, pathological and therapeutic novelties and claimed advancements found in the current medical literature, relate to the discovery of germs in some new relation or of some new application of the supposed germicide remedies. Even the very recent and popular *anti-pyretic* theories and remedies are rapidly giving place to so-called specific causes and remedies, and we are in danger of soon having a large proportion of acute diseases treated with as extravagant doses of the preparations of mercury, iodine, carbolic acid, and other active medicinal agents, under the idea of their germicide power or capacity to destroy supposed specific organic germs in the living body, as they have recently been of quinine, digitalis, salicylic acid and cold baths, for reducing temperature. Those who, like your reporter, have been in practice nearly half a century, are familiar with the use (and it might be added abuse) of mercurials in the treatment of all forms of disease both as alterants and evacuants, as they were with the modern *anti-pyretic* doses of quinine, as antiperiodic and sedative in the treatment of general fevers. And it is fair to presume that the effects of all these remedies will be the same when introduced into the human system, whether given under the ancient ideas of simple alteratives, evacuants and sedatives or the modern doctrines of antipyretics, germicides and specifics.

Before we go further, however, it may be well to inquire what proof there is that any remedies given internally are capable of acting, really, as germicides—that is, capable of actually impregnating the blood and tissues of the living body in such a quantity as to destroy existing microphites, whether bacteria proper

micrococci or bacilli, without at the same time destroying the life of the patient?

Clinical observations alone led me long since to the conclusion that this question must be answered in the negative. That we have many and valuable remedies capable of being administered in such quantity as to diminish or arrest deteriorative changes in the solids and fluids of the living body, I have no doubt. These are properly called antiseptics or antizymotics. But to destroy the vitality of existing bacteria, either as spores or fully developed germs, requires a far more active or concentrated remedy. One of the most valuable additions to our knowledge of this branch of the subject has been made during the past year by Dr G. M. Sternberg, U. S. A., in a well devised and extensive series of experiments, designed for testing the actual germicide powers of a large number of medicinal agents. The results are given in an interesting article in the number of the *American Journal of Medical Sciences* for April, 1883. It appears from his experiments that the three most active germicides at present known are the bichloride of mercury, permanganate of potassium and iodine. The first was efficient in destroying bacteria and micrococci, when used in the proportion of one part to twenty thousand parts of a solution containing the germs, the second required one part to eight hundred and thirty-three, and the third one to five hundred. If, as is estimated by most physiologists, one-eighth of the weight of the living human body consists of blood, an adult weighing one hundred and sixty pounds would require the presence of six or seven grains of the bichloride of mercury to make one part in twenty thousand of his blood, and no less than two hundred and twenty grains of iodine to make one part in five hundred. These figures, founded on Dr Sternberg's results, are quite sufficient to show that we have no remedies at present which can be safely introduced into the human system in sufficient quantity to act as efficient germicides. Consequently whatever benefit clinical experience may have obtained from the use of remedial agents given internally, must have been conferred by some other process than that of destroying bacterial organisms.

It will be remembered that one of the virtues attributed to alcohol as an internal remedy, by several recent writers, is its germicide power. Dr Formad, especially, placed much emphasis upon this property of alcohol as a remedy in the treatment of malignant diphtheria, recommending it in large and frequently repeated doses. But Dr Sternberg's experiments show that one of the most easily destroyed germs, the micrococcus of pus, required the presence of twenty per cent of alcohol for its destruction, while the bacteria termo survived immersion in a solution of 95 per cent alcohol twenty-four hours. It will be seen that the amount required to be present in the blood of a patient weighing 160 pounds, to destroy those germs most susceptible to its influence, would be about four pounds, or more than a quart of alcohol. This is certainly a much larger quantity than the most enthusiastic advocate of its use would deem it safe to administer. And I may add, as a clinical fact, that I

have recently had the privilege of seeing several severe cases of diphtheria under treatment with very liberal doses of whisky and brandy, without the slightest beneficial effect.

IMPROVEMENT IN THE TREATMENT OF INDIVIDUAL DISEASES

The medical periodicals during the past year have, as usual, contained many paragraphs stating the results of the use of particular remedies in one or more cases of disease, but they have generally been either some application of a well-known remedy to the relief of a particular symptom, or the number of cases treated has been too limited to afford a basis for reliable conclusions. Therefore, I will not occupy your time with any compilation of suggestions and items that are already accessible to you in the pages of almost every medical periodical you choose to take.

Perhaps the most important improvements made in the treatment of acute general diseases during the past year, consist in the continued decline in the use of alcoholic remedies and of heroic doses of antipyretics, on the one hand, and a gradual return to the use of mild evacuates, alteratives or antiseptics, sedatives, and an occasional venesection. It is true, that the resumption of the use of some of our oldest and most efficient alteratives—as mercury and iodine, and their preparations—is prompted by the prevalent germ theories, on account of their supposed germicide powers, and, as I have stated in another part of this report, there is great danger that, under this idea, their use being aimed, not at the correction of morbid molecular changes in the blood and structures of the body, but at the destruction of some supposed army of microphytes, or germs, will be pushed to an injurious excess, as has already been done with carbolic acid, iodoform, etc., in surgical practice.

The radical error in the therapeutics of the present time, is the effort to cure disease by directing remedies too exclusively against some one of its prominent symptoms—as in combating the high temperature of fever by antipyretics, cardiac weakness by alcoholics—or against the supposed cause, as in the use of so-called germicides. There appears to be a tendency to forget that disease is an unnatural or morbid condition of the properties and molecular movements of the solids and fluids of the living body, or some part thereof, and, when once established, always tends to pass through certain stages of progress or changes, either to health or destruction, even though its efficient cause may have ceased to act. Of course, in the management of disease, it is always important to suspend the further action of its cause or causes, but it is equally desirable to so select and adjust our remedies as to correct the morbid condition of the properties and movements themselves, and thereby prevent the suspension of important functions, or the permanent deterioration of structures. The ideas I wish to convey are well illustrated in the history of the management of typhoid fever. During the last twenty years, two prominent symptoms of the disease have engrossed the larger part of the physician's attention, namely, cardiac weakness and the high temperature. To count

the patient from dying by asthenia, the treatment came, finally, to consist almost exclusively of an abundant supply of nourishment, and an equally abundant supply of alcoholic liquors, to strengthen the heart. But as the disease involved such changes in the properties of the tissues and the molecular movements constituting assimilation and nutrition, that only a moderate portion of the food taken could be properly appropriated, while the excess only fermented, and added to the tympanitis and intestinal discharge, and as the cardiac weakness resulted partly from the impaired nervous sensibility, and partly from fatty or molecular degeneration of its muscular structure, the anæsthetic effects of the alcohol still further impaired vaso-motor sensibility, and encouraged the molecular degeneration, and, consequently, the death-rate soon reached one in five.

Turning from this to the other symptom—that is, high temperature—and, while endeavoring to directly combat it by the cold bath or pack, and other antipyretics, omitting a large part of the alcohol and some of the excess of food, the death rate was reduced to one in ten or fifteen.

And yet, clinical observation is constantly showing that a treatment consisting of a careful adjustment of the quantity and quality of the nourishment to the capacity of the digestive organs to appropriate it, the use of such general alterants as are calculated to sustain the properties of the tissues, and check the tendency to fatty degenerations, and such anodynes as may control local irritations or excesses, the death rate need not be higher than one in twenty-five or thirty, without a drop of alcoholics, or any other antipyretic than such sponging of the surface as is grateful to the patient.

In a clinical lecture in the medical wards of the Mercy Hospital, given in January, 1882, I made the following statements in regard to the use of iodine, as a general alterant, in the treatment of typhoid fever.

"The last time I took you to the bedside of typhoid fever patients I called your attention to the effects of iodine which I had then commenced giving, with the hope that it might be found capable of exerting more nearly the actual alterant and antiseptic influence needed, than any of the remedies hitherto used in such cases. Since then I have continued to use the remedy in all the well marked cases of typhoid coming under my supervision, both in the hospital and private practice. Without counting the case before us to-day, which is yet under treatment, the whole number of well marked cases in which the iodine was given as the leading remedy, is fourteen. Seven of these cases occurred in private practice, and the other seven were treated in these wards. Of the seven cases treated outside of the hospital, five came under my care during the first three days after the patients took to their beds, the other two not until the first half of the second week. Of those treated in the hospital, two were admitted on the third day of the fever, two on the fifth and sixth days, and the remaining three between the seventh and tenth after the commencement of the disease. You will note that nine of the fourteen cases were brought under

treatment during the first week after the onset of the disease, and the other five not until the first half of the second week. The treatment in all these cases consisted in the administration of from 12 to 15 minims of the following solution of iodine:

R Iodini	0.5 grams	grs viii
Potassii iodidi	2.0 grams	" xxx
Aquæ distillatæ	45.0 cc	℥jss

These doses were generally diluted with 30 cc or two tablespoonfuls of sweetened water, and repeated every four hours for the first three or four days, and then every six hours until indications of convalescence appeared. Whenever the intestinal evacuations became too frequent and thin, a teaspoonful of the ordinary turpentine and laudanum emulsion was given between the doses of iodine. When the temperature rose to 40° C (104° F), and the skin dry, the patients were frequently sponged with cold water. Two of the seven treated in private practice took two grains of sulphate of quinia three times a day during the last week of their progress. Nearly all of the seven treated in the hospital wards took small quantities of the mineral acids largely diluted with water during the earlier part of their treatment, and small doses of quinine three or four times in the twenty-four hours during the latter part. All the fourteen were carefully nourished by the faithful giving of milk, wheat-flour and milk gruel and beef tea at regular intervals.

"No alcoholic liquors, either fermented or distilled, were given to any of these patients during any part of their treatment. Of the nine cases in which the treatment was commenced during the first week after the patients took to their beds, four convalesced between the twelfth and fourteenth days, three between the fourteenth and seventeenth, and two between the seventeenth and nineteenth. Of the five cases in which the treatment was not commenced until the first half of the second week of the progress, three convalesced between the eighteenth and twenty-first days, and the other two between the twenty-first and the twenty-fifth. No one of the fourteen suffered a relapse, and no case terminated fatally."

During the eighteen months that have intervened since that clinic, there have come under my supervision forty additional cases of typhoid fever, twenty-five of which were in the hospital, and fifteen in private practice. All of these were subjected to the course of treatment just detailed. Of those treated in the hospital, ten were admitted during the last half of the first week after confinement to bed, and fifteen not until the middle of the second week. Of the fifteen treated in private practice, all came under my care during some part of the first week after taking their beds. Of these, all recovered in periods varying from twelve to twenty days. Of those treated in the hospital, all who were admitted during the first week recovered. Of those admitted later, one was complicated with broncho-pneumonia, and ultimately died from œdema of the larynx, after tracheotomy, and another was complicated with symptoms of unusual cerebral hyperæmia, and died during the second week of treatment. The remain-

ing twenty-three recovered in periods varying from fourteen to thirty days

You will see that the whole number thus far treated with iodine, as a general alterant, under my own care, is fifty-four of whom two died, or one in twenty-seven. The general character of the cases included in this list was of full average severity, as a large part of them occurred during the unusually severe prevalence of typhoid fever in the last half of 1881 and the first half of 1882. It was very evident that the iodine, in every case in which its use was commenced early, exerted a decidedly beneficial effect, in lessening all the phenomena of the general disease and in shortening its duration. But when commenced at any time after the end of the first week of the patient's confinement, the effects were less marked, though still of some value.

As additional evidence, showing the long-prevalent idea, inculcated in nearly all our modern practical works, concerning the necessity of alcoholic remedies in the treatment of typhoid fever, to be erroneous, I may cite you to an article in the *Archives of Medicine*, Vol IX, No 2, April 1883, by Dr A W Nelson, of New London, Conn, in which he gives twenty-eight successive cases of well-marked typhoid fever, treated chiefly with moderate doses of tincture of veratrum viride during the whole course of the disease, rest, and a judicious regulation of diet, and without a single death. Yet alcoholic remedies of any kind were given in only *three* of the cases. In one of these a little brandy or sherry was given on only two days. In another, a small quantity of brandy was given on five days, and in the third, whisky was given, with milk, during ten days of the treatment, the case running a more protracted course than any other one in the list.

PREVALENCE OF EPIDEMICS

The collection of information regarding the prevalence of epidemic diseases in different parts of the State, during the past year, was kindly undertaken by my colleagues on the committee, Drs B M Griffith, of Springfield, and J F Todd, of Chicago. The results of their diligent inquiries I present in the following short communications.

"W J Chenoweth, M D, of Decatur, Ill, says: During the past fall and winter we have had an epidemic of scarlet fever of so mild a character as not to demand treatment. When called on to prescribe we have advised inunction of lard and confinement indoors, with the liberty of the house. There has been but a single death from the disease so far as we know, and that was from suppuration in the middle ear, and retro-pharyngeal abscess, some two weeks after the rash had disappeared.

"Diphtheria has prevailed extensively. But few cases have died—none where the deposit was confined to tonsils and fauces. We are using a gargle of warm water and salt, or chlorate of potash, and giving quinine and whisky internally, but have no confidence whatever in any specific treatment. Mrs —, of Decatur, had a severe attack of nasal diphtheria, which was followed by a general paresis and a condition similar to *delirium tremens*, which lasted for

about two months, when convalescence was finally pronounced, and health established in about six months. When at her worst she imagined that her body was covered with vermin, that loathsome reptiles crawled up her throat and out of her mouth, that her bed was filled with beasts of every imaginable size and shape, rolling over each other ceaselessly, her best friends held high positions in government, or were plotting to injure other friends. After trying other remedies, we found that four grains of quinine and one grain of extract cannabis indica, given from four to six hours apart, controlled these hallucinations, and gave relief to the formication and pain. So marked were the effects of the drugs that her nurse learned how to time the doses with considerable accuracy. Neither medicine seemed to act alone.

"There have been a few cases of whooping cough, but it has not yet assumed an epidemic form.

"About the middle of December we began to witness cases of a disease which has since assumed an epidemic form. The prominent symptoms are, suppression of urine, extreme nausea, constipation, with a paroxysm of fever at night. Albumen in the urine has not been constant. The disease has not proved fatal, and has usually yielded, after four or five days, to mild purgatives and hot water packs.

"Articular rheumatism has prevailed extensively. At first we gave salicylic acid, but found that no cures followed. We then resorted to quinine, opium and purgatives, with better effect. We now give wine of colchicum seed, in teaspoonful doses, until it vomits, purges, and sweats—and feel satisfied that the cures are more prompt and more certain. The disease yields readily as soon as free catharsis or sweating occurs, and in many of the cases the patient is entirely well from an apparently severe attack in a week or less."

J M Henry, M D, Rockford, Ill, says: "In reply to your questions on postal of March 5, concerning diseases in my vicinity, would say: We had last summer an epidemic form of dysentery, extending over several weeks. Some of the cases were attended with severe congestion of mucous membrane, of the colon and rectum. A few of the cases ended fatally, but a great majority terminated in recovery. Nothing very peculiar as to its character or treatment. Our treatment in a majority of cases consisted in giving saline laxatives or castor oil, sometimes preceded by small doses of mercurials, after which we used ipecac and opium, in large doses, combined with subnitrate bismuth, to control the tormina and tenesmus. In nearly all the cases, we found it necessary to give sulph. quinine, to neutralize malaria, which was present. We used it in three to five-grain doses, every three hours. In cases where we found much tenesmus, we used starch water and laudanum or morphine. We tried large doses of ipecac repeatedly, without success, could not effect what is ascribed to it by some authors.

"We had, during the fall, considerable whooping cough, which was not attended with any peculiarity, but ran the usual course, and called for but little treatment. The prevailing fevers have been of the malarial character, requiring quinine or cinchonida,

sufficient to produce cinchonism. We have had very little purely typhoid fever here during the last year. Its place has been taken by what we (for want of a better name) call typho malarial fever. It begins with remissions and exacerbations, resembling remittent fever, but not yielding to quinine. Assumes a continuous form, and requires careful watching, not too much medication, and early support. I find some very obstinate cases of third-day ague, which required the continued use of quinine, combined with some alternative, to eradicate. I have been using, with success, quinine and iron, alternated with tincture of iodine in such cases.

"We have had less pneumonia to treat during the past winter than usual. Nothing peculiar in character of the cases I have seen, nothing new in way of treatment. We have had less sickness in our vicinity for the past year than for the year previous thereto."

H. H. Littlefield, M.D., Beardstown, Ill., says: "In response to your circular, I have to say that no epidemic disease has prevailed in this locality during the past year, but a nervous disturbance has been a prominent symptom, in connection with or attending many of our fevers, tending to paralysis or congestion of, or upon, the brain. The old 'nervous fevers' seem to be returning upon the people, with partial palsy."

"Cephas Park, M.D., Oquawka, Ill., says: Henderson county for the past year has not been visited with any epidemic disease from March 1, 1882, to March 1, 1883, but parotitis, which is very prevalent in this vicinity and in places in different parts of the county. It is universal, almost, in every family that has not had it. Its character for severity is unusual, especially among males. Where metastasis takes place, so far it has been invariably about twenty-four hours before the parotid becomes sore or any swelling takes place. In many cases they are affected all over, and but very little swelling or soreness of the gland. Complain of great muscular pains in arms, legs and body, with an intolerable thirst and complete loss of appetite. This condition lasts from two to six days, and generally results in metastasis to testicle. Very slight cerebral disturbance, nothing more than slight delirium when the fever runs high, lasting but a few hours. Duration, from five to twenty days before the patient is able to leave the house or assume his usual duties. In those whose testicles become involved, about the subsidence of the swelling and a general letting up of the disease, they are affected with considerable nervous prostration. The pulse becomes slow and weak, frequent sighing, anxious looks in some, of impending danger—all of which leaves upon recovery. This epidemic commenced in February, and is still in full blast. The month of February, and this month so far, has been cold and changeable, which has probably been the cause of its severity. Have been more particular in describing this epidemic, as it is the first for parotitis that I ever witnessed, and I have been in practice for thirty years. Mumps used to be considered a trifling matter, both by medical men and the general public. With those who have them and those who have not had them, in

this vicinity mumps are looked upon as a matter of great dread.

"The general health of our county has been good for the three years past. No enteric fever. Bilious, and bilious remittent and intermittent fevers are all the types. With some of our profession, a few days of bilious, remitting fever are diagnosed as typhoid fever. You may get reports from other parts of the county that typhoid has prevailed. If so, you will understand where our difference lies."

C. A. Palmer, M.D., Princeton, Ill., says: "Yours of March 1st received. In reply, I would briefly say that during last July and August we had a large run of dysentery, generally easily controlled. During the fall, a large amount of malarious complaints, which continued until as late as December. A general run of measles during the cold weather, complicated with pneumonia, many cases proving fatal, as was the result in quite a number of cases of lobar pneumonia during the cold weather."

"During the past six weeks we have had a peculiar endemic, that I have given no name to, as I could not exactly find one to fit. Probably fifteen per cent of the inhabitants suffered from it. The patient was generally taken with a chill, which, in many cases, was repeated several times. Pretty high fever (temperature from 102° to 104°), headache, drowsiness, heavy coated tongue, very severe pain and soreness of the muscles, especially those in the back of the neck, and back generally, urine very scanty, and loaded with triple phosphates. The course was generally about a week—some recovering in three days, some in four weeks. If a case ran one week without improvement, it generally assumed a typhoid character. The treatment found most beneficial was a combination of salicylate of soda, tincture gelsemium, and fluid extract *phytolacca decandra*."

In regard to Chicago and its vicinity I can report the prevalence of no well-marked epidemic disease during the past year. Typhoid fever, diphtheria, scarlet fever, pneumonia and cerebro spinal meningitis have all prevailed to some extent. The general character of the cases of diphtheria and scarletina has been mild, though some cases of both have presented a malignant aspect. The number of cases and deaths from typhoid fever, though above the usual average for a number of years, is below that of the previous year, while that of pneumonia has been decidedly increased. The relative prevalence and special characteristics of this latter disease was the subject of a short paper that I recently presented to the Chicago Medical Society, and which was published in the April number of the *Chicago Medical Journal and Examiner*, from which I copy as follows:

"In regard to the special characteristics of the cases of pneumonia which have occurred in this city the past year, I am not, perhaps, as well able to judge as many of you, my opportunities for observation having been limited mostly to hospital and consultation cases. Such observations as I have made have led me to think the great majority of cases were accompanied by the dullness of expression, softness of pulse, mental wandering, dark color of the bloody sputa, and occasional looseness of the bowels that would

require classing them as typhoid in their grade and tendencies

"In some of the cases coming under my observation, the cerebral symptoms were unusually prominent, and in two or three cases they were manifest in an unusual manner. The first symptoms were very severe pain in head, most severe in the occipital region with great restlessness and anxiety, hurried breathing, and only little elevation of temperature. After about twenty-four hours the pain drifted to the lower part of one side of the chest, extremely acute, causing the respiration to be short or stifled, very frequent, and pulse sharp and quick, but the closest examination detected neither the friction of the first stage of pleurisy, nor the crepitant rale of pneumonia, nor the dullness on percussion of the second stage of either. After the pain in the side and other symptoms mentioned, with temporary feeling of sinking, had continued for nearly forty-eight hours, the pains ceased, the mind became calm, but the pulse and respiration continued short and frequent, like one weary from physical exertion, and giving exaggerated or puerile respiratory murmur, but no râles or dullness over any part of the chest, and no expectoration. During the next twenty-four hours, however, the patient became gradually more dull or drowsy, the respiration shorter, with first crepitant rale over the right side of the chest, which gave place in less than eight hours to submucous râle, some bloody expectoration, and marked dullness on percussion, with a weak and frequent pulse. In less than twenty four hours after the first indications of pneumonic exudation, the whole of the right, and the lower part of the left, lung were completely filled with the exudative material, and the patient died.

"Another of this class was marked by a decidedly hysterical order of nervous symptoms, and after suffering excruciating pain, vacillating from the lower half of the left side of the chest to the head, often for several days, without developing any physical signs of either pulmonary or cardiac disease, there supervened well-marked symptoms of pneumonia, limited to the lower part of the left lung, quickly followed by endocarditis. These symptoms had progressed only about twenty-four hours, when the patient was seized suddenly with some convulsive movements, and shrieking, as if from intense pain. In this emergency a physician was called in, who administered morphine, both by the mouth and hypodermically. The patient soon fell into a sleep, from which she could be partially aroused six or eight hours later, but lapsed into stupor again, and died about twelve hours after the convulsion. In several other cases, the cerebral symptoms came early, and presented the delirium analogous to that often present in the more active grade of typhoid fever. During its continuance, the respiratory movements became less and less efficient, the moist râles more prominent, the pulse soft, weak and frequent, the extremities cool, and skin generally relaxed and wet with perspiration.

"In all these cases, the urine was scanty, and deficient in the chlorides, and was sometimes voided with difficulty. One of these patients died at the end of the first week after the attack, another on the eleventh

day, and the rest recovered, in times varying from nine to twenty-one days. All the fatal cases manifesting unusual cerebral symptoms occurred in private families, in which no post-mortem examinations could be obtained. Those coming under my own observation were in the south half of the West Division of the city, and it may be proper to remark that cases of cerebro-spinal meningitis were occurring with unusual frequency coincidently in the same part of the city.

"With the exception of the class of cases I have just been describing, the general character of the symptoms in the pneumonic attacks of the past year in this city has been such as to indicate a decided typhoid or asthenic grade of morbid action. In only a few instances has the fever in the early stage exhibited such a degree of periodicity as to indicate the presence of a distinct malarious fever.

"In regard to the treatment of pneumonia, I will detain you for only a few words concerning the more important items or questions that the subject suggests. The three principal sources of danger to life from acute pneumonic inflammation are, first, the extent and intensity of the vascular engorgement in the first stage of the inflammatory process.

"When the disease attacks the greater part of both lungs simultaneously, constituting full double pneumonia, as it occasionally does, both in children and adults, the compression of the alveoli or air cells from the over distention of the network of capillaries surrounding them may diminish the amount of air received to such a degree as to prevent the oxygenation and decarbonization of the blood. The respirations become hurried, panting and unsteady, the pulse feeble and frequent, while the heart at first beats excitedly, but soon gives indications of weakness and unsteadiness, the mind at first excited and anxious, soon becomes dull, and in some cases incoherent, while the whole external surface, including especially the face, neck and trunk of the body, appears first congested, then mottled with purplish spots, and finally cyanosed with cold extremities, entire collapse and death. Such cases in which the fatal results is from apnoea, or the direct exclusion of air, are of rare occurrence—not more than five or six having come under my own observation in a period of forty-five years.

"The second, and much more frequent source of danger to the life of the patient, is the amount of the exudation into the lung tissue and alveoli during the second stage in the progress of the disease. The exudation exerts a two-fold influence, namely, by depleting or actually diminishing the amount of blood in circulation, and by diminishing the oxygenation and decarbonization of the blood from the exclusion of air from a large proportion of the alveoli of the inflamed part of the lung. With from one to three pounds of the elements of blood taken out of the circulation in the form of exudative material, and solidified in the alveoli and interstitial spaces of the lung structure, thereby excluding an equal bulk of air, you will readily see how a strong sedative or depressing effect is produced on the functions of both respiration and circulation, and why the cardiac force

should be impaired, even to a dangerous degree, in the early part of the second stage

"The third source of danger is from the extent of purulent degeneration of the exudate, causing grey hepatization or diffuse suppuration instead of resolution, and progressive exhaustion of flesh and strength until death results from asthenia. It is thus evident that the cardiac weakness in the different forms, or rather stages of pneumonia, which nearly all writers of the present time mention as the chief source of danger, and on which they found their use of particular remedies, is only a symptom or effect, resulting in the first and second stages from the sedative effect of imperfectly arterialized blood, and in the third stage chiefly from the extent of the suppurative process in the inflamed structures

"If these views concerning the actual pathological conditions that may endanger the life of the patient are correct, the objects most necessary to accomplish by treatment become obvious and well defined namely, first, to limit the vascular fullness or accumulation of blood in the vessels of the inflamed part and lessen the morbid excitability of the texture in the first stage, by which we shall prevent a dangerous degree of direct compression of the air cells in double pneumonia, and most efficiently limit the amount of exudation which is to constitute the chief source of danger in the second stage

"There are three practicable methods by which the quantity of blood in a part may be diminished. First, by abstracting part of the blood, as by venesection, local bleeding and other evacuants, second, by diminishing the force and frequency of the heart's action by cardiac sedatives, third, by increasing the tone or contraction of the smaller vessels of the part, through the agency of the vasomotor nerves

"That a prompt free bleeding in the first stages of active pneumonia is capable of lessening the fullness of the pulmonary vessels and relieving the pressure on the alveoli in a marked degree, I have demonstrated so many times as to have no possible doubt of its reality. It is equally true that such relief will, in a large proportion of the cases, prove temporary, if relied upon alone, but if followed by the prompt and judicious use of such cardiac sedatives, coupled with mild anodynes, as will lessen the force and frequency of the cardiac action in the more sthenic cases, and by efficient doses of such remedies as promote an increase of the tone or contraction of the pulmonary vessels in the malarial and asthenic cases, the advantage gained by the bleeding will be perpetuated, thereby rendering the amount of exudation and red hepatization to constitute the second stage much less, and insuring an earlier and more perfect recovery. It is true that in all the milder more limited cases of unilateral pneumonia the venesection may be dispensed with, even in the active or sthenic type of the disease. In such the cardiac sedatives during the first stage, accompanied and followed by a combination of anodyne and expectorant remedies, with rest and proper nursing, is all the treatment required. But it is equally true that, in the more severe cases of this type, the omission of the bleeding at the proper moment greatly

increases the danger of unfavorable progress, and has in times past been the occasion of many fatal results. When the pneumonic inflammation occurs in persons whose blood and tissues have been under the habitual influence of malaria, the effect of quinine in from five to ten-grain doses, in restoring the tone of the pulmonary vessels and repressing the general febrile symptoms in the first stage, is in most cases prompt and efficient. I have seen some cases of this variety completely arrested within the first forty-eight hours after the initial chill, by taking five grains of sulphate of quinia with one of calomel and one of pulverized opium every three hours the first day, and every six hours the second. After the latter a mild laxative to move the bowels, and three grains of quinine three times a day for four days, was all the treatment required. In all ordinary cases occurring under malarious influences, the prompt and judicious use of quinine may take the place of blood-letting in the first stage of disease. But when the attack is severe, involving a large portion of one lung or portions of both lungs, and the patient comes under observation within twelve hours after the chill, a bleeding of from twelve to twenty ounces will render the action of efficient doses of quinine and opium more prompt and certainly beneficial than it would be without such loss of blood. When pneumonia occurs in the midst of sanitary conditions, favoring the prevalence of typhoid and typhus fevers, our reliance for diminishing the vascular engorgement of the first stage must be mainly on the use of quinine, ergotine, and sponging the surface with cool water, or covering the whole chest with emollient poultices

"I have called attention thus fully to the treatment of the first stage of pneumonia, and the different agents that may be employed for accomplishing the same general object (relief of the vascular engorgement of the inflamed structure), and their adaptation to the treatment of cases occurring under different ætiological conditions, because it is only by acting in this first stage promptly and judiciously, that we can materially limit the amount of exudation which is to follow, and determine the danger or safety to the subsequent stages of each case. I had intended to allude to two or three other items of importance in the treatment of the second and third stages of the disease, but I have already occupied too much of your time, and will defer them until another opportunity offers."

HYGIENE OF LOW DIET

BY GUSTAVUS SCOTT FRANKLIN, A. M. M. D., FELLOW
AMERICAN ACADEMY OF MEDICINE

[Read before the Ross County Ohio Medical Society]

In certain diseased conditions of the human body both theoretical and practical knowledge teach us that the ordinary food of a healthy person is inappropriate, oftentimes very harmful. The results of modern physiological investigation, supplementing and confirming, in scientific manner, the clinical ex-

perience of numberless acute and observing physicians have made plain to every medical student of the present day, that when the digestive functions are not in fair working order the amount and quality of the food to be taken should be a matter of careful consideration.

Modern physiology tells us that in all acute diseases when the pulse is high and the temperature increased, the digestive apparatus is not in a proper condition to work up and to assimilate ordinary food, that all the digestive fluids—the bile, the gastric, the pancreatic, and the intestinal juices—are much diminished in quantity and much altered in quality, that food, if not digested and absorbed, is worse than useless because it quickly decomposes in a feverish stomach, and the irritating products of such decomposition are capable of increasing fever and general distress. Long before these facts were demonstrated as a matter of science, Hippocrates recognized them clinically and did not deem it unnecessary or undignified to teach posterity in voluminous words how to make properly his favorite barley ptilan. Most of this clinical knowledge was, of course, purely empirical until Dr Beaumont demonstrated upon the person of Alexis St. Martin, and Dr Schmidt upon Caroline Kutt, many of the physiological principles which govern the scientific practice of the present day. Dr Beaumont saw and exhibited to others the moist velvety surface of the living, healthy stomach, and the quick and plentiful response of gastric juice on introducing food. He also demonstrated the dry, glazed and turgid mucous membrane of a stomach suffering from the effects of fever and the poor digestion of food with little or no normal gastric juice to work it up and prepare it for assimilation. He also found that very thin and watery foods were absorbed by simple endosmosis into the blood vessels of the alimentary canal. This exact and visible demonstration of facts, long before accepted empirically, is only too seldom made the basis of therapeutical food administration at the present day, and even the well educated physicians present will not, I hope consider me presumptuous in calling their attention to the subject.

The experience of Hippocrates and his successors, and the more exact and definite experience gained in hospitals where trained nurses could guarantee the exact carrying out of all instructions, could report symptoms precisely as they arise, and thus the physician could be better assured of his facts, has led to a therapeutical division of foods into at least four classes. In American hospitals these classes are generally called (1) full diet, (2) half diet, (3) low, fever or spoon diet, (4) special diet. Full diet is given to those patients who are entirely free from fever, having normal pulse and temperature and who show by a vigorous appetite and a ready, painless digestion that the system demands and is able to care for something similar to the ordinary food of a healthy man. Half diet is ordered for those who are recently convalescent, free from fever, having a normal pulse and more hunger than the sparer diet will satisfy, but whose digestion is not thought vigorous enough to manage full diet. Low fever or spoon

diet is ordered for those whose feverish temperature, frequent pulse, loaded tongue, dry mouth and skin, irritable stomach show their inability to digest and absorb anything that cannot readily be taken into circulation through the veins of the stomach by osmosis. Special diet is ordered by the attending physician when he considers it necessary to tickle the palate of the patient or to meet some special indication.

The composition of low diet, which is the present subject of consideration, includes such thin and easily absorbed foods as may not in any way excite or distress the stomach when it is almost if not quite unable to digest anything. The rule to regulate our advice should be—the higher the fever, the thinner and more bland the food. Food and drink together, given frequently and according to the apparent necessities of the system, is thus secured. Among such foods may be named toast-water, rice-water, barley-water, gum-water, wine wheys, as the thinnest, most easily absorbed, least likely to distress the stomach, or to increase fever, and yet nourishing enough for use during a short period. If fever is not very high, or prostration, as evidenced by feeble pulse and loss of strength, be noticeable, then gruels, preparations of milk, beef-tea, mutton broths, cream soup, egg soup, wine soup, egg nogg, and other similar nutritive and sustaining foods, may be appropriate. When the fever is past, with but little likelihood of a relapse, thicker and more nourishing foods may be allowed cautiously.

Just here let it be observed, that the caprices and fancies of the sick-room are out of place, and should be courteously but firmly discouraged when the illness is of an acute and serious character. This caution is even more applicable to food than to medicine, since every good-hearted neighbor may be unwittingly working to defeat the best devised schemes as to proper nutrition. It should be the duty of the attending physician to explain his wishes thoroughly, to give explicit orders and instructions, and to see that his directions are carried out as exactly as possible. This can easily be done in well-regulated hospitals, with their corps of well-trained nurses—such nurses as we hope to see more frequently hereafter in private practice.

Within the range of foods mentioned above there is a remarkable field for the exercise of sound judgment and a scientific pathology. Certain articles of food being better adapted to certain conditions, should most assuredly be assigned to those conditions when it is possible. In my experience, a full, quick pulse, high temperature, loaded tongue and irritable stomach is preferably fed by well made barley-water, which is nutritive, laxative and diuretic. If the patient cannot take the barley-water, either from caprice, or from natural disgust, or from want of will-power, or because it is badly prepared, try the toast-water, which is bland, unirritating and nutritive, or the rice water, which is nutritive and slightly astringent, or the gum-water, which is demulcent and nutritive, or the wine wheys, which are nutritive, stimulant and sudorific. Just as soon as the temperature reduces and the pulse falls, especially if prostration of strength

is apprehended, the sparer diet should be made more nutritive and strengthening. Barley gruel, oatmeal gruel, cornmeal gruel, milk, cream soup, egg soup, beef-ter, mutton broth, egg-nogg, etc., have their proper places and their indications. Increase of fever, pain in the stomach, vomiting, flatulence, and diarrhoea, are finger-posts to warn us that we are on the wrong road, that we had better change the diet as circumstances dictate.

A fair knowledge of food therapeutics can only be acquired after careful investigation into the specific character and value of foods, and when clinical experience confirms the theories we form, the conscientious physician is very apt, like Hippocrates, to become an enthusiast on this subject. I believe my own studies on food dietetics have borne rich fruit in my practice, and I am certainly increasingly fond of informing myself on everything which relates to it. In this line of study we learn how to nourish, and still not to inflame, how to feed the stomach, and yet not to produce an excess of bile, how to supply a demand for strength, and not load up the enfeebled system with irritating detritus, how to feed the patient, and not the fever, in fine, how to restore to health, and not allow either starvation or repletion to snatch a victim from under our very eyes. The clear recognition of the need of our fever patient for demulcents, or for laxatives, or for diuretics, or for sudorifics, or for astringents, or for stimulants and the ability to supply these needs at least approximately by the scientific use of food, leads to great clinical triumphs, and is a source of immense satisfaction. The ideal treatise on this subject is yet to be written, and probably waits a companion treatise on pathological physiology, which needs another St. Martin and a more highly educated enthusiast than Beaumont to limn its outlines.

PARALYSIS OF THE FACIAL NERVE IN CONNECTION WITH DISEASES OF THE EAR

PY LAURENCE TURNBULL, M D, PHILADELPHIA

[Read before the Section on Ophthalmology, Otolaryngology and the American Medical Association, June 1883.]

Diseases of the ear and their connection with general medicine is a subject of grave importance, and the general practitioner who neglects or omits their study will often fall into serious errors of diagnosis, and of necessity be unsuccessful in treatment.

Acute and chronic disease of the middle ear will give rise to temporary or permanent facial paralysis, alteration in taste or smell, sight, and even gait. False epileptiform convulsions, hemiplegia and insanity are also due to reflex phenomena, from irritation and compression of the sensory and motor nerves of the ear, or the result of necrosis of portions of the temporal bone. It is now a well recognized fact that pyæmic abscesses in the brain and some forms of rheumatic fever have their starting point in the middle ear.

Paralysis of the parts supplied by the facial nerve occur and are the result of acute inflammation of

the middle ear, followed by accumulated secretions in the fallopian canal, eustachian tubes, or necrosis of the mastoid cells.

A number of cases of facial paralysis have occurred in the Aural department of the Jefferson Medical College Hospital, one of which has already been reported in the author's paper¹, and additional cases will be of interest in this connection.

Case I.—The history of the first case I will state briefly. It occurred in a woman aged fifty, the subject of a malignant tumor situated in the tympanum, and caused originally by a polypus, which gradually extended, involving the osseous meatus, auditory canal, temporal bone, and passing out through the auricle, until it formed a large double tumor. The lesion was situated between the petrosal branches of the fifth nerve, involving the chorda tympani. The periostitis caused irritation and pressure, which ultimately involved the brain, and was followed by death.

Case II.—A young woman who was under the care of our colleague, Dr. James C. Wilson, one of the physicians to the Jefferson College Hospital, was referred for our opinion in reference to the condition of the ear.

September 28, 1881. Josie E., aged 24, presented herself with almost entire facial paralysis, caused by exposure and a life of dissipation within a short period.

I found the hearing of one side much impaired, right ear watch not heard on contact, left ear was fur, rather less than normal.

Tuning-fork heard in air on left side, right not even on contact, nor in the air, voice had to be elevated in tone.

Discharge, none. Tinnitus like "waterfall."
External meatus filled with desquamative epithelium.

Mem. tympani, right, thickened and sunken.
Mem. tympani, left normal with good reflex.
Chronic pharyngitis, tonsils enlarged.
Cause specific inflammations of internal and middle ear, no hereditary deafness. Health has not been good.

Complicative paralysis of the facial nerve implicating chorda tympani.

Treatment.—Has been taking potass. iodid, 40 grains three times a day, with use of Faradaic current, removal of desquamative epithelium and opening the eustachian tubes.

After two weeks H.D. improved to R $\frac{1}{2}$ inches, watch right, and left to 8 feet.

Gradually the paralysis nearly disappeared, with almost entire recovery of hearing, before she left the hospital.

The history of the third case was referred from the eye department for examination by Dr. Wm. S. Little, chief of the ophthalmic clinic of the Jefferson College Hospital.

John L. White, aged 17, while passing out of his house was attacked by a drunken sailor who, mis-

¹Morbid Growths of the Ear and their Treatment with Illustrative Medical and Surgical Cases by Laurence Turnbull of Philadelphia. Trans. International Medical Congress London Vol. III, p. 339 (1881.)

taking him for a person against whom he had a grudge, stabbed him in the ear with an oyster knife. It entered the meatus and passed downwards and outwards not dividing the membrana tympani, but a branch of the fifth nerve paralyzing the facial. The young man cannot close the eye of the left side because there is paralysis of the orbicularis palpebrarum. The following is his clinical record, No 1374 March 22, 1882

Richmond Vt, Glass Factory employe—R I ¹⁸/₃₆ E, ¹⁸/₃₆, tuning fork in the ear, discharge R, none, L, mucopurulent purulent, tinnitus like a "steam engine." Cicatrices in orifice of meatus of L side, L membr tympani white and irregular, handle prominent, eustachian tubes both open, chronic pharyngitis, tonsils normal, duration, four months, cause, stabbed by an oyster knife in left ear, constitution, good, complications facial paralysis. Diagnosis, "otitis media plastica traumatica." L E traumatic division of chorda tympani from punctured wound of meatus in the floor of tympanum, referred to eye clinic for treatment, recommended use of galvanic battery and potassi iodidi, entirely recovered.

As these cases are rather rare forms of facial paralysis, I will dwell upon the subject for a short period. Most of the cases of facial paralysis which are met with are of a peripheral origin, or outside of the brain and constitute what is known as Bell's palsy or paralysis. Such come on suddenly from exposure to cold in a railroad car or when overheated from sitting opposite a crevice in a window or door. This form of paralysis is generally attended by pain, and as the pain is relieved the paralysis shows itself, the pain, however is not in the facial nerve, as it is a nerve of motion, but is generally of a rheumatic character and from some irritation of the fifth nerve. To locate the lesion as I have already done, the student must study the anatomy of the nerve. The facial nerve emerges at the lower border of the pons varolii, near the medulla oblongata. From this origin a large number of fibers may be traced backward into the pons where, on the border of the floor of the fourth ventricle it connects with the same nucleus as the eighth or portio mollis. It is also connected with the nerve by a small fasciculus, the portio inter duram et mollem.

The nerve then passes forwards upon the crus cerebri to the auditory meatus. Entering the first upon the inner side and then upon a groove in the auditory nerve then into the aqueductus Fallopi, and following its tortuous course throughout to its exit at the stylo mastoid foramen. In this aqueductus it gives off three branches, the superficial internal and external petrosal and the chorda tympani. By the superficial petrosal it is connected with Meckel's ganglion to which it supplies its motor root.

In our first case the paralysis is due to a periostitis affecting the facial nerve and the brain by pressure. In the second, it is the result of syphilitic gummat, and in the third to traumatism.

In the first case, there was profound deafness of that side, in the second, partial deafness, which was removed by the administration of iodide of potassium and the use of the galvanic current, and in the last the deafness was very slight. In examining the throat

of the third case we find no deviation of the palate or uvula, and that the paralysis is located on this side of the great petrosal nerve. The record of the hearing, you will notice, is almost normal, and the same on both sides. Now, if the lesion were back of the smaller petrosal branch the tensor-tympani would be paralyzed, and the levator muscle, making the membrane less tense, the hearing would be less acute.

Patients with the lesion located back of this nerve have a very acute or painful sense of hearing and cannot bear even a loud cough, sneeze or sound without distress.

The value of electricity in the treatment of these cases is that it stimulates the muscles, and if the faradic current causes no response we must not give up the case, but employ the galvanic current. In the case of paralysis from traumatism, the faradic current caused muscular contraction, and the young man improved and was able to close the eye April 15, 1882. To apply the current, place one pole, negative, back of the ear and pass the other pole, positive, over the peripheral distributions of the nerve and obtain contraction of the muscles of the face. The strength of the application should be perceptible, but not painful, and as long as response be obtained, even by a faint current, there is hope for improvement.

By way of illustration, I have collected three other cases, all differing from the first reported. I may here state in passing, that there may occur a form of facial paralysis by simple swelling of the nerve in connection with a chronic suppuration in the middle ear.

In expressing an opinion as to the existence of facial deviation in a doubtful case it must not be lost sight of that an unsymmetrical condition of the mouth may and often does exist in some persons.

Reporter, DR C J BAKER, of Boston

[Trans Am Otological Society Vol 1 Part 3 p 353 1879]

No 1—Age, 17, sex, female, duration, 12 years cause, scarlet fever, discharge, otorrhoea

Treatment—Astringent applications to throat, inflation tonics, syringing and astringent instillations.

Result—(March) Greatly improved in general condition free from pain or vertigo, slight discharge from the ear, and polypoid mass diminished in size by the use of alum. Facial paralysis the same (April 16) Patient placed under Dr S G Webber, of Boston. Faradic reaction entirely gone, and galvanic reaction only in a few muscles about the angle of the mouth. Under continued use of galvanic current, the eye could be closed about three millimeters, the corrugator muscles had not recovered, and there has been gradual though slight improvement in voluntary action of the facial muscles.

BY EUGENE FRANKF

(Arch of Otology Vol 14 No 111 p 211 September 1880)

No 2 Age, 28, sex, female, from infancy, cause, the absence of a bony wall separating the facial nerve from the drum cavity, caused by a direct compression of this nerve by the plug of inspissated cer-

dation filling that roomy cavity in the petrous bone (See autopsy) Purulent discharge

Three days' treatment in hospital, violent headache, for which patient took large dose of morphia, patient died May 5, after gradually increasing coma

Autopsy.—In brief, cochlea internal meatus and the nerves terminating within were intact, the facial in its course between the two bends of the fallopian canal also offers nothing noteworthy, below the second bend the wall toward the drum cavity is destroyed, and the nerve is separated from the plug of exudation filling the above mentioned cavity, only by a thin mucous membrane

The first case is interesting in regard to the location of the polypoid growth, in the posterior portion of the tympanic cavity, and that pressure on the mass and upon the region in front of the ear, causing severe vertigo, in connection with the observations of Politzer on the occurrence of openings in, or thinning of the bony wall of the facial canal, in relation, also, to a previous and evidently severe inflammatory process within the tympanic cavity, which may in its results have paved the way for the peculiar symptoms occurring with the latter disease, and also of interest as concerns the degree of recovery attained after a facial paralysis existing for a long period, as shown by the results of the treatment above given by Drs Blake and Webber. Occurrences of the nature in the first and second cases render intelligible the well established fact that paralysis occurring in the brain, with purulent otitis media, may stop as soon as the cause maintaining the paralysis ceases. Absorption of the masses of exudation compressing the nerve is certainly not impossible, if proper and careful treatment is followed. Green reports a case (death ensued from meningitis), no cerebral abscess present, in which the fallopian canal was likewise open towards the drum cavity, so that the facial nerve appeared covered directly with the swollen mucous membrane

THE SCIENTIFIC DUTIES OF MEMBERS OF MEDICAL SOCIETIES.

BY H. B. HEMENWAY, M.D., KALAMAZOO, MICH

[Read before the Kalamazoo District Medical and Surgical Association
Sept. 2, 1883.]

The physician is a scientist and an artist. In but few individuals do we find the two combined in equal proportions. In some the artistic principles are predominant. Others have come to devote nearly their whole attention to the science of physic. The latter form by far the less numerous class. The art and the science are therefore distinct, but they are also intimately connected. The former, as old as the human race probably, is very successful when founded upon scientific principles, while the other had its origin in the art.

We have just said that the art is only successful when it is founded upon scientific principles, and yet it is a well-known fact that the most learned are often very poor practitioners. On the other hand, a very ignorant man may be eminently successful, especially in some particular line of cases. This is no refutation, however, of the statement made. Our

best instructors in music are very often very ordinary players. They understand what makes sound, music, and discord. They may be thoroughly acquainted with the laws of harmony and with the method of instrumental manufacture in all its minutiae, but they have not such command of their muscles as to do as well as they know, and in execution frequently the scholar excels the master. The same is true, though probably in a less degree, in our own profession. The empiric is not conversant with the truths upon which his treatment is based. Others have worked out problems to which he remembers the answers. It is a lamentable fact that too often the country physician permits himself to drop into this sort of quackery. He may have had the best of college education. He may have been under the guidance of the most learned of our profession. As he left his *alma mater* he may have done so under the most auspicious circumstances. When he becomes established in practice, however, he has occasion, for example, to dispense his own medicines. For a cathartic he gives the compound cathartic pills of the pharmacopœia. He finds them satisfactory, and buys them by the wholesale rather than make them himself. In the course of time he forgets the exact composition of the pills, but he gives them right along, thinking not so much of the special bearing of each drug upon the case, as that he wants to get a movement of the bowels, and they do the work. He desires something to relieve pain. P. D. & Co's chloranodyne is handed him. He tries it, likes it, and adds it to his list. "Tougaline" is his remedy for rheumatic neuralgia, but in nine cases out of ten, the doctor prescribing it cannot tell its composition. If he is reproached with using these ready-made preparations, he will tell you that he has not time to compound drugs. He has tried the combinations and is satisfied with the results. He knows about what cases this or that remedy is good for, and where it will do harm. Why not then designate each combination by a special number? What is there out of the way in a local drug firm scattering hand bills, which tell the people that Dr. T's No. 29 is a specific for dyspepsia, and No. 45 is highly recommended for "female weakness"? If it is known that Dr. A prescribes "Dyspepsium," why should we object if druggist B recommends "Ingluvin"? The time is not far in the past when a president of our own State Medical Society was sending to lady patients all through the country two kinds of powder, both bi-carbonate of sodium and chloride of ammonium, I think, but one was colored with cochineal. How much worse is that than if he had put them upon the market labeled "Zoa-phora"? There is another objection to prescribing ready-made mixtures. The physician becomes less discriminative in his use of drugs, and is thus led to use more than is necessary. Take the use of Dover's Powders for a "cold." It is by no means impossible that in very many cases the result would be as perfect without the opium, and there would not therefore be the risk of getting the opium habit. This is not the only danger for the country practitioner. He finds his time so fully occupied that

his journals do not get the thorough reading which he desires. His cases are so far apart that he can not so easily study them critically as he could if they were side by side in the wards of a hospital. Often he sees a case so seldom, and so short a time that his history of the disease must be imperfect. For a like reason he is very slow to try a new remedy. His work naturally drops into routine. In this malarious region, for example, in a large majority of cases he will give quinine, even though he might not get clear indications of malarial poisoning. What is the result of this line of work?

Years ago, in the clear air of New England, if a patient was found suffering with pneumonia in its earlier stage, his veins were opened and his chance for recovery was good. With the tide of emigration into this State the disciples of *Æsculapius* came also. Here too pneumonia was found. Of the diagnosis there was no doubt, *ergo* venesection was practiced, but the more blood was extracted the more surely did the patient die. In the one case there was the sthenic type, and by diminishing the amount of blood pressure, the infiltration of lung tissue was diminished, there was less to be absorbed or to break down, and the patient's chances for recovery were better. In the other instance the system had already been depleted by malaria and exposure. In such a case it were clearly better to do nothing at all than to diminish what little strength the patient had left. As a consequence the regular practitioner, relying more upon his former experience with the disease in question than upon his careful study of the case before him, saw his patients laid away for their final rest, while his neighbor was rich in giving directions to "take a teaspoonful out of each glass alternately an hour apart."

In that humorous historic poem found in "Percy's Reliques," upon "King John and the Abbot of Canterbury," the Abbot's shepherd cheers his master by the question

"Did you never heare yet, That a fool he may learne a wisse man witt?" We are also reminded that Sir Walter Scott once said that if after a half hour's conversation with any man, no matter how ignorant, he found that he had learned nothing, he began to suspect that he himself was the greater fool of the two. As scientists we have no right to cast aside and condemn as valueless any system until we have thoroughly examined it and extracted all that has worth.

A scientist's duty is not done when he carefully collects the ideas and observations of others. He should endeavor to discover new truths. So one of our duties as medical practitioners is to widen the foundation upon which others are to build the future. Our common title indicates this, and it is a very objectionable feature of our American educational scheme that the term "doctor" is here so common and so meaningless. Legally, the man who has registered in our own county as having received his degree after studying twelve weeks in a Chicago homœopathic school has just as much right to be called

"doctor" or "teacher" as the venerable president of our American Medical Association, or that surgeon from the City of Brotherly Love who has been honored in old Oxford with the degree of D.C.L. The degree M.D. here gives one little, or no idea of the knowledge which the bearer thereof possesses. It tells nothing of his social or moral standard. It behooves us then, as members of this society, so to conduct ourselves as to raise the professional standing in this community.

This is now the only active medical society in this region of country. To this society every honest physician within its bounds should belong. It ought to be a college of teachers who will exert an influence for good over the whole State. Do you ask "How is this to be accomplished?"

In the first place, the Association ought to use every means in its power to uphold and enforce all State and local sanitary laws. It is a well-recognized fact, for example, that the recent law regulating practice in this State is a very weak and defective piece of work. It is a law, however, and every member ought to be a committee of one to see that it is not broken. We should be thankful for small favors, and regard this as but an opening wedge.

Secondly, As a society we ought to have a good professional museum and library for reference. If we are going to allow ourselves to depend upon what we have learned in the past with what little we may pick up, we shall not need a society library. But how many of us have such a large supply of medical literature that we could not soon exhaust it in studying any subject?

The social gathering is a highly desirable or important feature of our meetings, but for that alone the majority of us cannot afford to give up all other work. Every person who has a privilege has also a duty. There are some men who are perfectly able to work who allow themselves to live at others' expense. There are also in some societies drones, who come regularly to take all they can get of the fruit of other men's work, but never condescend to collect the golden nectar for the common store. In some medical societies, too, there are those who come around when it is convenient, discuss in an off-hand manner the subject under consideration, and perhaps they relate the symptoms of some case under their observation. But the duties of the members of this society do not end there. We ought to have not less than one good, thorough, scientific article read at each meeting. Am I wrong in saying that any man or woman who does not present such a paper as often as once in three years, is not worthy of being a member? I think that is not too strong a statement. Nor ought it to be left to the Secretary to find those to write such articles, especially since some refuse to prepare them when requested. It may be objected that the busy practitioner cannot find the time. Read Samuel Smiles' "Self Help," or Dr. John Brown's "Spare Hours." I remember that when I was in college one or two of the professors were frequently absent when their turn came to lecture. They always had this same excuse of professional-business. It was a note

worthy fact, however, that those who had the largest practice were the most sure to fill their hours

Would it not elevate the standard of the society to require that every person should read before the Association a paper showing original investigation in some line of professional work before he should be admitted to membership

What kind of paper do you want? We want them short and clear. Do not repeat in order to make the article longer. Do not try to cover too large a field. Let the article consist of a general review of the subject, followed by a more minute examination of some particular portion, with personal notes, if possible. A compilation and analysis of the thoughts and observations of others is better than nothing at all, but original investigations are the most needed. Distinguish clearly between fact and theory. Such a paper would not only be profitable to the whole society, but it would benefit its writer far more.

As a society we ought to make some original investigations. Take diphtheria one year and require each member to note down and report every case under his observation, telling age, exposure, both as to time and kind, duration of disease, treatment and result, water used, house clean, condition of cellar? The next year we might take pneumonia. In such work it would be better to work with the committee of the American Medical Association in accordance with the report of the JOURNAL of August 25.

Our highest duty and privilege is not to deal out physic, but to preserve the health of the community in which we live. This we must do as public teachers. At the last meeting of the American Medical Association it was recommended that each county society establish a school for nurses. Said school to be conducted as best might suit the circumstances, but probably on the lecture plan. Do we not need such a school here? And would we not be personally benefited?

NOTES ON TRACHEOTOMY, WITH CASES

BY W. H. MYER, M.D., ET WAYNE, IND.

[Read in the Tri State Medical Society, September 1883.]

It is not new facts that avail but the heat to dissolve every body's facts. —Emerson

FOREIGN BODIES IN THE AIR PASSAGES

I will not discuss the nature of the bodies introduced, how introduced, nor the symptoms developed by their presence, but the prognosis, and that only so far as it refers to the effects.

Of the operation itself I have only this to say. It should not exist—at any rate in the professional mind—as a *desperate resort*, for this would delay the surgical treatment, and the prognosis would be accordingly extremely grave, believing with Trousseau that “there is an imperative duty imposed upon the practitioner of performing tracheotomy as obligatory tying the carotid artery when that vessel has been

wounded, although death quite as often as recovery follows the operation.”

I will further urge the propriety of *early* operation in all cases of tracheal obstruction, whether depending upon the presence of foreign bodies or obstruction from disease, differing, as I am well aware, from Dr. Wiest, who recently published an extremely interesting paper on this subject. In it he enunciates the following propositions:

1. “The presence simply of a foreign body in the larynx, trachea or bronchi does not make bronchotomy necessary.”

2. “While a foreign body causes no dangerous symptoms, bronchotomy should not be performed.”

These inferences were based upon 937 cases, of these 599 were not operated upon, 76.79 per cent recovered and 23.20 per cent died. Bronchotomy was performed in 338 cases, 72.48 per cent recovered and 27.42 per cent died, leaving in favor of non-interference 43.1 per cent. The fallacy of the argument is apparent when the author attempts to determine in what cases bronchotomy should be performed. This difference furnishes the solution to the results in the tables, and vitates their value in the light in which the author presented them, for it is evident all the *difficult* cases would be included in the list operated upon, and the less difficult, where spontaneous expulsion took place and caused but little disturbance, these would be found in the class where nature effected the cure.

These tables establish the following conclusions:

1. When foreign bodies were easily expelled—for instance seeds—recoveries took place in a larger per cent than in the cases subjected to bronchotomy.

2. Only those where spontaneous expulsion had *not* taken place, and the symptoms were urgent—the *bad cases*—those threatened with asphyxia, inflammation and its products, were subjected to bronchotomy.

“Modern medical literature teems with statistics as to the results of tracheotomies. Their study only establishes the conclusion that the operation must be made with reference to the individual case in question, rather than with regard to the proportionate number of recoveries.” The above is the language of one of our most enlightened specialists. While I will not attempt to deny the value of statistics, when properly presented, yet in medicine, we know the plainest rules of philosophical investigation have been disregarded. Things have been associated having no necessary relation, and conclusions have been drawn that had but an indifferent foundation in fact. Statistics imply something more than a process in arithmetic. They should be a profound philosophical analysis of materials carefully collected, with an enlightened confidence in their fitness for the purpose in question.

Without the proper regard for the principles here enunciated, they have been singularly barren of results. When the historian, the chemist and the naturalist require unexceptional authority for the statistical facts, and do not hesitate to subject them to a rigid scrutiny, only then do they become of any value. They must be applied only to incidents and events that have an objective existence, and just so far as

¹ Troeltsch, Lehrbuch p. 413 seg.

² “Cases of Fatal Otorrhoea. Boston Med and Surg Jour. Nov. 30

they have a subjective relation to the mind, in that degree are they incapable of being statistically expressed, and are mere matters of opinion. The above statements are made in the presence of a complete knowledge of the labors of Zuntz, the controversy of Sir J. Y. Simpson and Charles D. Meigs, and the publications of the Statistical Society of London.

In reply to the second proposition "While a foreign body causes no dangerous symptoms, bronchotomy should not be performed," I have only this to say. I believe the prognosis to be materially influenced by the period of sojourn of the foreign body. In delay we incur the hazard of

Asphyxia

Chronic inflammation of the larynx and trachea

Chronic phthisis

Pulmonary abscess

Bronchitis, with or without hemoptysis

Acute phthisis, and even apoplexy

Furthermore, his proposition is not sustained by the surgical profession.

Sir Benjamin Brodie, speaking of a foreign body remaining in the air passages, says "The records of surgery furnish abundant evidence that under such circumstances diseases of the lungs, sooner or later, are induced, and the death of the patient invariably ensues."

In the Principles and Practice of Surgery, by Holmes, speaking of treatment, he uses the following language "When the diagnosis of a foreign body has been made, the surgeon should allow *no delay* in removing it at once."

Prof S. D. Gross writes as follows "Having satisfied himself that the foreign body is in the air passages the sooner the surgeon opens the wind pipe the better, for the want of this precaution I have known a number of children lost in the vain hope that extrusion might occur spontaneously." These are the expressed opinions of Morrell McKenzie, Prof. Spence, Chelius, Hamilton, and Pancoast. James T. West, Senior Surgeon Queen's Hospital, Birmingham, thus forcibly pronouncing his views "The fact that a foreign body does exist in the air passages, no matter whether it causes urgent symptoms or not, calls imperatively for surgical interference for its removal, and the surgeon who defers the operation does so at the risk of leaving the patient in danger of sudden death."

That the non-interference doctrine is not sustained by the medical profession, I will quote from a lecture delivered by Dr. Johnson, of King's College, London "A foreign body in the larynx is a continual source of danger, therefore, it should be removed as speedily as possible, even though the present symptoms may not appear alarming nor very distressing." Sir Thomas Watson says "When we know that a solid body has been entrapped in the air tubes our business is plain. There is no room in my opinion for hesitation. We must let the substance out through an artificial wicket."

There is no security except in the early performance of tracheotomy. The above opinions are fully sustained by Stokes, Neimeyer, Meigs, Bristow and

Trousseau. Among the cases which have come under my observation with foreign bodies in the air passages four children perished without tracheotomy, and in these cases death did occur, after a lapse of four or five days, it was almost instantaneous. You will infer from the foregoing that I am not a believer in spontaneity. In Germany therapeutics have been signalized as something hardly better than Nihilism, and the practice of physic not much more than a meditation on death. Let it not be said that we as surgeons will stand idly by and wait for nature to kill or cure our patient when a foreign body is in the air passages. For myself I can boldly affirm that I live to heal, that there are now a few persons in the world who, but for me, would have been amongst the dead, and this remark will apply to every educated practitioner.

This doctrine of spontaneity has its American headquarters in the State of Massachusetts and its capital is Boston, where nature trusting to homœopathy and its kindred delusions have led to well pronounced skepticism in the healing art. If nature is a curer, then are we impostors. Nature pursues her ways with men, regardless of their infirmities. The living man left to his course with reason to guide him, is neither protected from disease nor cured of it when assailed, for him no special force or power is evoked in case of accident. To trust to so called *vis medicatrix nature* and neglect or omit scientific methods of cure is to forsake the path of duty and leave to chance that which falls within the domain of reason. Does nature cure ovarian dropsy or catarract, or if she sometimes cures spontaneously an aneurism or hernia, or a wound? Do we trust to her unaided efforts in any such cases? Neither can we trust to nature to spontaneously expel the foreign body, its exit being opposed by the narrowing of the glottis, which takes place during expiration, especially when this is augmented by the spasm and cough which its presence excites.

"To say nature cures disease is a bad expression if it create in our minds a metaphysical conception as if there were some personal animus controlling the operation"—Sir William Gull.

Efforts of nature are regarded with watchfulness and doubt. Often must we agree with Professor Houghton, of Dublin, who, when told that the evacuations of cholera are due to an effort of nature to cure the disease, said "I will tell you what nature wants. She wants to put the man in his coffin, and that's what she succeeds in doing for the most part."

Not long since I read of a learned professor who was desirous to illustrate to his class the curative effects of nature in the disease known as pericarditis. He commenced his learned proof of natural cure by taking the heart of the cured man out of a pickle jar, and by describing from the disorganized specimen how beautifully the heart, by the exudation of lymph, had become adherent everywhere to the pericardial surface, and thus prohibited the pericardium from being filled by water.

In one case only, observed by me, was the foreign body expelled spontaneously after remaining four months in the respiratory passages. The sequelæ

were never entirely recovered from, so that my own experience agrees with McLeod's, that "hope of spontaneous expulsion is not great, and may, by its delusive promise, fatally delay operative proceedings."

In 1879 a child aged 4 years was placed under my care for treatment. The history was briefly as follows. Four days previous to the visit a grain of corn passed into the trachea. Tracheotomy was decided upon, but was unavailing, for the grain of corn could not be dislodged by the use of forceps nor by the expulsive effort of the lungs. The autopsy revealed the true condition. Hepatization of a portion of the lung, and the grain of corn firmly impacted in the bronchus. Its enlargement was the result of the imbibition of fluids. Who can doubt the child perished the victim of delay.

In 1872 a boy, *æt* 6, was brought to the St Joseph Hospital in Fort Wayne, with a foreign body in the trachea, no urgent symptoms were present. Twenty four hours had elapsed since the intrusion. Upon opening the trachea the grain of corn escaped through the opening made, and a rapid recovery was the result.

In the few cases of diphtheritic croup operated upon by me, the result was uniformly fatal, due entirely to the opposition to tracheotomy in the earlier stages, thus depriving them of the only chance of being saved. By this time, you all understand that I am a decided advocate for early interference in all cases of obstruction in the air passages, whether it be a foreign body, croupal or diphtheritic exudation, chronic laryngitis, syphilitic or tubercular, or in paralysis of the arytenoid cartilages.

To illustrate the effect of tracheotomy in laryngeal disease, I will present two cases of perhaps more than ordinary interest.

On the 28th of June, 1883, I was hastily summoned to see Wm Moyer, the messenger announcing the probability of the death of the patient "ere we could arrive the point proposed." Upon my arrival, I found him insensible, respiration feeble and gasping, surface cold and clammy, pulse almost imperceptible. I was impressed that not one moment was to be lost, that promptness and rapidity were both required, so extreme was the urgency.

With the knife, I made a long incision, extending from the cricoid cartilage almost to the episternal notch. The structures overlying the trachea being divided by a few strokes of the knife, the hæmorrhage was venous, ligation of blood-vessels was out of the question, for the delay would have caused the death of the patient.

Upon reaching the trachea, I did not wait to use the tenaculum or short-tooth forceps, as recommended, but flattened it by pressure with the left index-finger, and thrust the knife boldly into it, dividing three rings. Separating the edges with forceps, the tube was quickly placed in proper position by Dr Devilbiss. No immediate improvement occurred. The insensibility gradually passed off in three hours.

I found him almost fatally asphyxiated by the carbonized blood, acting upon the exhausted nerve centers as a powerful sedative, failing to arouse the

healthy gasping respiration which usually takes place in a less degree of carbonization. He had thus become greatly narcotized, days before my visit.

In this case, then, we witnessed the most serious features of bi-lateral paralysis of the abductors, producing that glottis closure, which gave rise to the peculiar dyspnoea from which he had been suffering long anterior, but in a less degree, than at the time when surgical treatment was necessary to save his life.

It is probable now in this case that the abductor muscles have undergone degenerative change, owing to disease, implicating one or both recurrent nerves, and that the disease is of a specific nature.

On the 1st of July, 1883, I was called in consultation to visit Moses Millman. I found him suffering with deep suppuration of the cellular tissue of the neck, the swelling extending from the sternum to the chin. His illness was of fourteen days duration. I was enabled with the aspirator to make out the diagnosis. The purulent collection was in the immediate vicinity of the trachea. I carried an incision down to this point extending from the cricoid cartilage to the episternal notch. A large amount of dark, highly offensive, fetid pus made its escape. After the wound was thoroughly washed out, and the pus had made its escape, spasm of the glottis ensued from the presence of pus that had made its way into the pharynx and the air passages, respiration ceased, as did also pulsations of the heart, and apparently our patient was dead. I opened the trachea, and kept up artificial respiration until at last our patient rallied, after three hours insensibility passed off. He is now almost restored to health after a tedious convalescence. The wound in the trachea was allowed to close up and no tube inserted.

I will not speak of the pathology of cellulitis, or point out its distinctive clinical characteristics as distinguished from erysipelas or diffuse abscess, but will remark that the treatment of cellulitis of the neck is not satisfactory in its results. Bilroth reports no recovery. Jordan was unsuccessful. Bickersteth has advised an incision on the middle line down to the trachea. In the case just reported the incision was made *into* the trachea, partially owing to the exigency, I admit, and I am able to report favorably.

I would recommend tracheotomy also in chronic thickening of the mucous lining, and in ulceration from the effect of tertiary syphilis or tubercular deposit in the mucous membrane. For if allowed to progress they usually terminate in œdema of the glottis, and cause death, in cases such as above described. Spence strongly urges the operation, informing us that the improvement of the general health is often very marked, and that with a large experience in such cases, the results have been almost uniformly successful.

We may now briefly consider the treatment of chronic laryngeal disease by surgical procedure after medical measures have failed.

In the thesis maintained by Professor Krishaber, of Paris, in the Laryngological Congress at Milan, he says he has employed against laryngeal phthisis all known topical remedies, nitrate of silver, sulphate of

zinc, iodine, chromic acid, scarifications and they have all proved ineffectual. He now uses local applications of narcotic sedatives only. He maintained that the local therapeutical means are without action, and concludes "We require something else and something better."

Now let me ask is not tracheotomy the remedy? I believe in the future the attention of the profession will be profoundly directed to surgery, instead of to medicine for relief in those cases. The intimate relation between laryngeal disease and pulmonary disease can no longer be doubted, nor the fact that the exciting cause of pneumonia may be the result of blood poisoning through the absorption of morbid products from ulcers in the larynx, as when after syphilitic ulceration the lungs are involved and also when laryngeal phthisis is followed by tubercular infiltration of the lungs. These are points worthy the best attention of the physician and surgeon.

The sequence of events are often as follows. The laryngeal disease may be the result of a neglected cold, sore throat and hoarseness remaining for months, cough and mucous expectoration, pain and difficult deglutition. In this early stage of the laryngeal affection there is no evidence of pulmonary disease, the chest movements and the percussion sounds are normal, yet in a large proportion of these cases the physical signs of tubercular deposits are discovered in due time, and is it not the result of pre-existing laryngeal affection? It is not improbable that morbid infecting materials from the ulcers in the larynx may be carried by inspiration into the interior of the lungs, or that the lymphatics may become the poison route? If this theory be true, and I believe it is, may not the question of tracheotomy be entertained even in the earlier stages before the dyspnoea imperatively demands it. This would secure absolute and complete rest to the larynx from the movements of phonation and respiration, and freedom from all currents. The rest thus secured would favor the resolution of the inflammatory process and prevent the absorption of septic materials.

IS CONSUMPTION AN INFECTIOUS DISEASE?

BY U. P. STAIR, M. D., OF BLACK EARTH, WIS.

I wish briefly to offer a few observations upon the subject of the nature and origin of tuberculosis.

At the recent meeting of the State Medical Society of Wisconsin, held at Milwaukee, September 4, 5 and 6, a resolution was adopted declaring in substance that we now know consumption to be an infectious disease, and that the authority of the State Board of Health should be sought to the end that persons afflicted should be "separated from intimate association with the well in our public institutions." It would seem to me that the passing of this resolution as based upon what we actually know concerning the origin and nature of consumption, is wholly premature. We certainly do not know that consumption is an infectious disease. On the contrary, the vast majority of the profession, from actual clinical experience as we believe, are pretty well satisfied that it is not

We do not know positively, that it is a disease capable of being transmitted by heredity, but we believe it is and to say that the profession has, all these years been making a great and fatal mistake in regarding tuberculosis as a hereditary malady, hopelessly deathward in its tendency, and in which there was little to be done but to palliate severe symptoms, is to make a very grave charge indeed. We learn from a report presented to the same society a year ago, by Dr. Senn, of Milwaukee, that this author believes that tuberculosis is both a parasitic and hereditary disease, that the primary condition is inherited and the active disease parasitic.

As to the primary condition of tuberculosis being a result of heredity we believe with Dr. Senn that there can be but little question. The only doubt that remains is as to the origin of the active phenomena manifested. Do these arise from parasitic infection? The affirmative answers given to this question recently no doubt rest very largely upon the late investigations instituted by Dr. Koch, of Berlin. But are we to accept the conclusions of this author as final upon this all-important subject. I think not. Already dissenting voices are heard of such authority that they must receive due attention. Prof. Formad, of the University of Pennsylvania, in a lecture reported in the *Philadelphia Medical Times*, November 18, 1882, declares most emphatically for the non-parasitic origin of tuberculosis. He there says that he pursued essentially the same method of staining in its recent improvements as described by Dr. Koch, and after four years of careful experiment upon animals he arrives at the following conclusions briefly stated thus:

The presence of bacilli is merely accidental wherever found in tuberculosis deposits. "The tuberculous tissue seems to serve merely as a nidus for the growth of the bacillus" and again he says:

"An analysis of Dr. Koch's experiments shows that he has not proved the parasitic nature of phthisis or that there exists a special bacillus tuberculosis, and that the infectiousness of tubercular disease is still *sub judice*."

Prof. Formad regards the primary condition of scrofula and tuberculosis as being one and the same, and that this condition consists in an abnormal "narrowness of the lymph spaces and their partial obliteration by cellular elements," and then he adds "The natural history of tuberculosis just narrated, is surely against the existence of a special poison, such as now offered by Dr. Koch," and again "Koch has discovered that tubercle tissue is always infected by bacilli, and this is correct, but this tubercle tissue is not created on account of, or caused by, the bacilli. These organisms invade the tissue in question solely because it is a culture medium favoring their predominant development."

Then in respect to the special character of the parasite, Prof. Formad further says "Koch further claims that the bacillus tuberculosis differs from other bacilli morphologically, and in its behavior to staining fluids. We can not confirm this. My assistant, Mr. Bodmer and myself, after prolonged study with instruments as good as those of Koch, and after using

all known methods of staining, have failed so far to see any special features in the bacillus in question which would make it distinct from other bacilli."

It would transcend the limits assigned to this article too far to pursue the interesting investigations of Prof Formad further, but, it seems to me, enough has been shown to cast serious doubts upon the pathological and microscopical evidence in favor of the parasitic origin of consumption, and if this evidence fails, what is to be said of that afforded by clinical observation. I am well aware that the doctrine is not new. More than fifteen years ago Dr DeCosta published an article in the *American Journal of the Medical Sciences* suggesting the possibility of the contagiousness of consumption and giving several illustrative cases which seemed to lead to this view. My attention having been thus called to the subject, by careful observation I endeavored to satisfy myself as to whether the claim could possibly be sustained by clinical facts. But thus far I don't remember a single instance where infection, pure and simple, and outside of all hereditary influence, could have borne any part whatever in the origin of this disease, or wherein the disease was produced by infection alone, without the accompanying hereditary taint. I would not venture thus to give the results of my own limited experience, were it not that I feel assured that it is in accord with that of the vast body of my professional brethren. It seems to me, in the face of these considerations, it would not be well for the profession to rush into the grave mistake of asking for legislative authority upon the practical application of a mere theory which a little time and a more extended inquiry may change very materially or dissipate altogether, leaving behind, as a result, humiliation enough, if not absolute hindrance to the advancement of medical science.

Besides, let me add, that to ostracise the unfortunate consumptive from the kindly care and social influence of friends and loved ones, for years it may be, as this doctrine demands, is a matter of very grave import, and should never be attempted for any cause whatever, short of a positive demonstration that justice and the safety of the well absolutely require it.

MEDICAL PROGRESS

A CASE OF CHYLURIA IN WHICH CASEINE WAS DETECTED IN THE URINE—The *Moniteur Scientifique* for September contains the details of an interesting case of chyluria, by Dr A Livson, followed by a minute chemical study of the urine by M E Seger, pharmacist. The case was that of a woman, native of Normandy, and 27 years of age, unmarried. For some years she had suffered from cardiac troubles, severe neuralgia, shortness of breath and œdema of the legs, there existing insufficiency and disease of the mitral valves. Pulse weak and irregular. The menses formerly free and regular, became irregular, appearing every three months, flow in small quantity and very painful. Palpitation of abdomen showed apparently a body the size of an orange attached to

the uterus. The kidneys sensitive to pressure over them and painful, urine red, depositing an abundant red substance, and varying in quantity between 800 and 1200 grammes. These symptoms gradually became aggravated, when suddenly after a violent crisis resembling that of nephritic colic, the patient declared that her abscess had opened and showed her chamber pot containing urine resembling a mixture of bouillon and milk. Microscopical examination determined the presence of fat globules without pus or blood. Chemical examination by heat and nitric acid produced an albuminous precipitate which was so peculiar in its characteristics as to cause M Seger to submit it to a careful chemical analysis. From this time on the fatty matter continued to be discharged with pain in the kidneys and abdomen, but without any apparent effect on the patient's adipose tissue—milk being almost the only nourishment. In the course of the analysis occasionally a minute clot of the size of a pin's head was found but never blood in solution, and no filaria were present. Examination of the venous blood showed nothing unusual. To sum up. In lieu of albumen Mr Seger found caseine in the urine, in which were also present all the elements of milk except sugar. Neither fat nor caseine was present in the blood. For two years the disease did not increase and the general condition was satisfactory. The treatment during that time consisted simply of a milk diet, bleeding at the time of the crisis and the use of potassium bromide.

The record of the case is followed by a careful analysis of the urine showing that the quantity passed in twenty-four hours was 1400 to 1600 cub centim, the density 1.020, less urea than normal, the quantity of fat eliminated in twenty-four hours is very variable, being between 1 gr 07 and 7 gr 54. The quantity of uro-caseine in solution in twenty-four hours varying from 0 gr 46 to 1 gr 16.

The term uro caseine is used from a certain reserve in deciding the question of identity between this substance and the caseine of milk which it resembles so very intimately.

BROMIDE OF POTASSIUM IN THE TREATMENT OF DIABETES—In the month of August of last year M Felzet, Hospital Surgeon, presented to the Paris Academy of Medicine, a memoir which caused considerable stir, upon the treatment of diabetes by bromide of potassium. The results as announced were marvelous. Two very marked cases of diabetes were relieved in a few weeks or even in a few days. The Academy appointed M Dujardin Beaumetz to experiment thoroughly with the method of M Felzet. His report has now been presented and is favorable to the method. He accepts fully the numerous successful cases as due to the bromide, 15 cases observed by M Felzet in his memoir, 14 cases after reading his paper, a number of cases noted by MM Herard and Dreyfus-Brisac, and finally those of M Dujardin-Beaumetz himself. The bromide of potassium has not only relieved temporary cases of diabetes which might in time be relieved of themselves, but has equally relieved very decided and inveterate cases.

The reporter found, however, that it was difficult to judge accurately of the value of the bromide as M. Felizet associated with this treatment as much of gymnastic exercise as possible, as well as the use of other agents, as arsenic, iron and chinchona, without paying much attention to the diet. He found that this drug employed habitually to the extent of 4 grammes per day, produced an intellectual depression and a decided prostration of the general forces, which conditions M. Felizet affirms that he effectually overcomes by his gymnastic exercises.

In the discussion which followed, M. Ricord without reserve gave his approval of the treatment. He had treated successfully by its means 8 or 10 cases during the past year. The objectionable symptoms attributed to the bromine could also be accredited to diabetes, which also diminishes the force and produces cutaneous emissions, and the best way of economizing the forces of the patient is to cause as soon as possible a disappearance of the sugar from the urine. Dr. A. Chevallineau who gives us this account in *La France Médicale*, August 30, adds to the preceding his own experience in two cases of temporary diabetes, where the sugar disappeared in one after five days, treatment suspended, return of the sugar, treatment renewed for fifteen days with entire relief, in the other it entirely disappeared in fifteen days. He also gives a case of diabetes of ten years standing, which had been relieved by other treatment so far as to reduce the amount of sugar from 35 grammes to 3 or 4 grammes per liter, a treatment of five weeks caused its entire disappearance. In a case of cataract the urine was entirely relieved of its sugar in about three months, but the cataract was not influenced by it, except that only one eye was affected. On the other hand he cites a case by Dr. Pasteru of a man 65 years of age, affected with double cataract, and passing 175 grammes of sugar per day, upon whom the bromide, continued for three months, produced not the slightest influence.

ANAL TUMOR OF AN ERECTILE CHARACTER—M. Richet in his hospital practice at the Hotel Dieu Paris gives a description (*Gazette Hôpitalaire*, Aug. 30) of a case occurring in a young man, who, at 17 years of age, after several days of obstinate constipation, followed by an excessive discharge, found a tumor present in the anal region. From that time each stool was followed by its protrusion, accompanied by a little blood. In the last eighteen months it commenced to protrude independent of the stools, particularly after walking, and to increase considerably in size. At present the least effort causes its protrusion and necessitates an attempt at its reduction. Last year a case somewhat analogous presented itself, but in an older man, and due to a relaxation of the muscular fibers of the sphincter, rendering it unable to retain the hæmorrhoidal tumor. But here there is no relaxation, the sphincter contracts very perceptibly. Upon asking the patient to make a straining effort while inspecting the parts, a little bluish swelling appears at the orifice of the anus, which gradually increases in size, the external projection of which becomes more and more pro-

nounced like an erectile tumor, and the sphincter yields by degrees until the whole tumor passes out. It is as large as a hen's egg, bluish in color, projects between the nates, and shows, upon its mucus surface, a series of tortuous veins which, if ruptured, would give rise to a marked hæmorrhage, being, in fact, an aneurismal venous tumor. Here we have neither a discharge of blood or mucus. It does not belong to what is called the red or the white hæmorrhoidal tumors. It forms a third group. Fortunately the sphincter does not contract upon it or the result might be that of total or partial sphincter, gangrene, etc. M. Richet proposes to remove it by means of the cauterizing *ecraseur* process.

ON THE HEATING OF SURGICAL INSTRUMENTS—Prof. Leon Tripiet (*Lyon Medical*, Aug. 26) gives us his method of preparing surgical instruments by heat for operation. He asserts that instruments, as a rule, are not subjected to a proper degree of heat. Cutting instruments, as an example, are not submitted to the flame and special hæmostatic processes are passed through the flume in an irregular and insufficient manner. He began his experiments with a gas chafing dish, a porcelain capsule filled with oil, in which he placed a bistourie. Between 90° and 100° C the cement gave way, between 125° and 130° the pins which held the blade and handle together fell out into the vessel. The cutting edge of the blade was found to be as good as ever. Satisfied with this experiment Prof. Tripiet has had constructed a brass box 40 centim long, 27 high and 20 broad, intended to receive oil which can be brought to a given temperature, and in which can be placed the necessary surgical instruments. Under the bath is a burner, supplied with gas and furnished with an Arsonval regulator and a tube à sauterelle. The box is divided into seven compartments, differing in size according to the instruments which they are intended to receive. These compartments communicate with each other by means of a double bottom, the upper part of which is pierced with holes so as to allow of an equalizing of heat throughout the mass of oil. The bottom of the compartments intended for saws and amputating knives is provided with layers of cork to prevent the blunting of points and edges against the metallic surface. For small instruments like forceps, bistouries and scissors, he constructs little baskets plaited out of annealed iron wire, which can be placed in the oil. The temperature should be 120° to 130°, to reach which requires about three quarters of an hour. The instruments should remain at least ten minutes, then be placed in the large basin containing a solution of phenic acid 50 to 1,000, which has been heated to 70° or 80°. All instruments used in general operations should receive this bath, and then be placed in the basin for use during the operation. The question of handles becomes important here, and Prof. Tripiet first thought of using metal handles, but found them seriously inconvenient, and recommends the English mode of prolonging the metal into handles formed of two lateral portions fastened with pins.

RELIEF OF FILTED SWEALING FEET BY SUBNITRATE OF BISMUTH—M. Vieusse (*Gazette Hebdomadaire*) recommends highly the use of this drug in this affection. The footed sweat follows different forms of affection of the feet, sometimes the derm is naked and exposed from the maceration of the epidermis, and is the seat of severe pain. At others the skin does not seem to be altered at all, while the odor from the sweat is very marked. In either form frictions, with subnitrate of bismuth, have been followed with success, by using twenty or thirty grammes of the drug, being careful to rub it well into the interdigital spaces. In most cases its daily use for fifteen days produces perfect relief. The epidermis becomes firmer, and loses its whitish appearance, is less wrinkled and adheres to the subjacent tissue. The secretion diminishes.

SUBCUTANEOUS INJECTIONS OF AMMONIATED MERCURY PEPTONE IN THE TREATMENT OF SYPHILIS—The 18th volume, 2d series, just received, of the *Société Médicale des Hôpitaux de Paris*, contains a memoir on this subject, by Dr L. Martineau, in which he details one hundred and eighty cases of syphilis submitted with benefit to this treatment. The use of subcutaneous injections has been employed with greater or less success since 1854, when it was first made use of by Prof Scarenzio in Italy. Different formulæ were used at various times to prevent pain, abscesses and scars, until Staub, in 1872, used a solution containing the white of egg, with chlorides, forming what he termed the "chloro albuminate of mercury," as being capable of being absorbed. Disagreeable accidents still ensuing, this mode of treatment fell into disuse in the treatment of syphilis. Bamberger prepared what he called the peptonate of mercury, which was not followed in its use by abscesses or eschars, but which produced pain, nodosities and more or less persistent numbness. Dr Martineau obtained the services of the pharmacist, M. Delpech, who used the dry peptone of M. Catillon, which is exceptionally pure, and made the following combinations. Bichloride of mercury, 18 grammes, peptone, 15 gms, chloride of ammonium, 9 gms, 1 gramme representing 0.25 centigr of corrosive sublimate. For injection, ammoniated peptone, 0 gr. 40 centigr, distilled water, 30 grammes. This solution would give 4 milligrammes of the sublimate to an ordinary hypodermic syringe containing 1 gm, 20 centigr, and will keep well for several days.

Dr Martineau gradually increased his doses subcutaneously until he reached 5 milligrammes which he found to be well borne, that the pain was not persistent. A few of his cases complained of its lasting for a day, but in most of them it only continued for an hour in the first injections, afterwards the pain was unimportant, there was no local irritation provided the injection was subcutaneous, that 4 milligramme doses were not followed by any evidences of salivation, no mercurial stomatitis or gastro-intestinal disturbance, and that given in this way the effect was more prompt and rapid than when given by the mouth.

Later in his experiments Dr Martineau used an injection, which was prepared for him by M. Delpech, as follows.

Peptone, in powder, 9 grammes, chloride of ammonium, 9 grammes, corrosive sublimate, 6 grammes. This was dissolved in glycerine, 72 gm, distilled water, 24 gm, of which 5 grammes of filtered contained exactly 0.25 centigr of the sublimate, which in solution with 25 grammes of distilled water, gave to a syringe holding 1 gramme 20, exactly 10 milligrammes of the sublimate, which dose Dr Martineau used to advantage, but he considers 5 milligrammes as the proper dose. He recommends further that the glycerine solution be prepared only in small quantities and when required for use.

M. Armezano, by a careful chemical process, which it is not necessary to detail, obtained from the urine of the patients submitted to this treatment the red crystals of the biniodide of mercury, showing that the mercury introduced by injections is eliminated within the first ten days.

Dr Martineau further cites one case occurring in the practice of another physician, where a patient submitted for six days to internal mercurial treatment became so freely salivated as to prevent all continuance of treatment. These injections were substituted of the strength of 3 to 5 milligr, and to the number of 45, without inducing salivation. The cases cited show a rapid and energetic influence upon a great variety of syphilitic manifestations, as papillary, papulo hypertrophic, papulo erosives of the vulva, anus, vagina, uterus, mouth, tongue, and tonsils, cutaneous affections as erythematous, papillary, papulo squamous, and maculæ, lenticulæ, ulcerated and tubercular ulcer.

By slight modifications this preparation of mercury can also be used internally. In a group comprising several cases, Dr Martineau used the following with benefit.

Peptone mercuric ammonias, 1 gm, glycerine, 50 gm, distilled water, 200 gm, of which solution a coffee-spoonful represented 5 milligr. He gave one to two spoonfuls a dose, mixed with water or milk, producing no nausea, no vomiting, and none of that metallic taste which persists sometimes for hours with other preparations. The urine examined in these last cases showed traces of mercury.

ON SOME POSTEPILEPTIC PHENOMENA—In a paper read in the Section of Medicine, at the annual meeting of the British Medical Association, at Liverpool, August, 1883, Julius Althaus, M.D., M.R.C.P. LOND., Senior Physician to the Hospital for Epilepsy and Paralysis, Regent's Park, makes the following introductory observations before describing a series of cases.

"I wish to draw attention to certain either acute or chronic alterations of the mental faculties which have fallen under my notice, as direct consequences of epileptic attacks. I shall purposely exclude, in discussing this matter, any cases in which epileptic form seizures took place in consequence of gross or

bleeding, which is slight, is easily checked by a compress of cotton-wool, and the little cuts heal rapidly. After a week's interval, the operation should be repeated. Occasionally two or three operations are all that is needed, but more often it is necessary to repeat them several times. The scar left is smooth, supple, and usually distinguishable from the healthy skin only by its paler color, being little, if at all, depressed.

In the severer ulcerating forms of lupus, especially in lupus exedens, the one alluded to in the opening of the paper, scarification, to be of service, must be used more boldly. We have sometimes to plunge the whole blade of the knife into the mass for a depth of one-half to three quarters of an inch, to incise it in all directions, leaving the part in a condition literally of mince-meat, but without removing any portion of the tissue. This plan, I can state from my own personal experience, is most effective, and fully merits the favorable recommendation of Vidal.

In comparing scraping and scarification, the former—though it has the advantage of rapidity—in the character of its scar is much inferior to the latter. Scraping is, after all, a destructive method, similar to, though milder than the older forms of treatment, as it mechanically removes the diseased material, whereas scarification is essentially conservative in its action. The incisions, by cutting off the blood-supply, modify the nutrition of the new growth, and lead to its atrophy with a minimum loss of substance. In addition, in the severe forms of lupus exedens, in which scraping fails, or even aggravates, scarification acts most rapidly and completely. A further, though minor advantage is that scraping, on account of the pain, requires an anæsthetic, which can be dispensed with in scarification.—*British Medical Journal*

NEW YORK CODE CONTROVERSY—In a recent number of the *Medical News* the editor finds the present status of the controversy in New York concerning the Code of Ethics as follows:

"The Code controversy in New York has now reached the stage in which argument has ceased, and the strength of the respective parties is being carefully computed prior to the appeal to the ballot in the New York County Society—the birthplace and stronghold of the New Code—on the 29th proximo, and in the State Society next February.

"A poll of the 1661 physicians whose names are in the New York City Medical Register shows that 764 adhere to the National Code, 404 are advocates of the New Code, and 54 of no code. The remainder are uncommitted. In the New York County Society, we are reliably informed, the advocates of the National Code are largely in the majority.

"The canvass of the State, which is still in progress, shows that there are 2,405 physicians who adhere to the National Code, 924 to the New Code, and that there are 215 who advocate having no code.

"These figures are extremely gratifying. They show that the profession of the State has been completely misrepresented in the State Society at its last two meetings, and they unerringly point to the speedy revocation of the New Code."

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THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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TRAINED NURSES—It will be remembered by those present at the recent meeting of the American Medical Association in Cleveland, and such others as may have read the full record of proceedings contained in the first number of this journal, that Dr S D Gross, of Philadelphia, offered, and the Association adopted, the following preamble and resolution:

"WHEREAS, Good nursing is of paramount importance to the comfort of the sick and the restoration of their health, and

"WHEREAS, The subject is one which strongly addresses itself to the common sense and kindly sympathy of every intelligent member of society, therefore,

"Resolved, That this Association, fully recognizing the importance of the subject, respectfully recommend the establishment at every county town in our States and Territories, of schools or societies for the efficient training of nurses, male and female, by lectures and practical instruction, to be given by competent medical men, members, if possible, of county societies, either gratuitously or at such reasonable rates as shall not debar the poor from availing themselves of their benefit."

This action of the Association, prompted by Dr Gross, has attracted the attention and received the approval of several of the more influential medical journals, and is of sufficient importance to engage the attention of the profession generally. In several of our largest cities there are already regular training schools for nurses in connection with permanent hospitals, in which all the advantages are afforded for making accomplished and reliable nurses. But the benefits of such organized and thorough training schools, etc., and in the nature of things must be

limited to the larger cities. To secure the better training of nurses for the towns and country districts, where they are even more necessary than in the cities, on account of the longer time between the visits of the physician, Dr Gross, in an article contained in the *Medical News* of September 15, says

"To educate nurses for the rural districts and villages, all that is necessary is to establish a central office or bureau at every county town in each State and Territory, and to place it under the charge of its medical society, which should elect two, or at most three of its members, to give the necessary instruction. One, for example, might take charge of the various matters comprised under the head of requirements of the sick-room, including hygiene and the nature and preparation of food, another, the mode of examining the patient as to the condition of his tongue, pulse, countenance, skin, temperature, posture, and excretions, the mode of administering medicines, their doses and actions, poisons and their antidotes, while a third might busy himself with surgical, obstetrical, and gynecological appliances and dressings, including the treatment of hæmorrhage.

"Where no county society exists, the same object may be attained by the banding together of any two or three competent physicians in the place. Notice of the time and place of meeting should of course be given in the public prints, and also by card. A small matriculation fee should be charged, and also, where possible, a small fee for each of the instructors, to assist in defraying expenses. The teaching should be as practical as possible—essentially practical—each pupil being obliged to perform her work in the presence of her instructor, not once or twice, but again and again. Free use should be made of the blackboard. The outfit of such an establishment need not exceed fifty, seventy-five, or at most one hundred dollars. There should be frequent examinations, and at the final one a certificate of competency should be awarded to the successful candidates.

"If the plan now suggested be faithfully carried out, as I confidently believe it may be either as here presented or with such modifications, changes, or alterations as circumstances may render necessary, it can not fail to be instrumental in saving many lives, in preventing much suffering, in inspiring hope in the sick, and in imparting confidence to the professional attendant. If this plan succeed, I shall feel that I have accomplished the greatest work of my life.

"To aid the pupil in her efforts at acquiring knowledge, she should avail herself of a proper text-book. Of this class of works I have now six lying upon my table, and, after a careful examination, give the preference, as to completeness, to the *Hand-Book of Nursing*, published under the direction of the Connecticut Training-school for Nurses. A *Manual of Nursing*, prepared for the Training-school attached to Bellevue Hospital. Anderson's *Lectures on Nursing*, and Cullingworth's *Manual of Nursing, Medical and Surgical*, are also excellent productions worthy of a place in the library of the nurse and of the physician. Any of these books may be obtained of Blakiston, Son & Co, 1012 Walnut street, Phila-

delphia, at one dollar a copy. A *Manual for Hospital Nurses* has been issued by Mr Edward J Domville, of London, and is now in its fourth edition, and there is a brochure, entitled *Notes on Fever Nursing*, from the pen of Dr James W Allan, of Glasgow, reprinted in Philadelphia. Much valuable information will be found in the *Notes on Nursing*, by Miss Florence Nightingale, published soon after her return from the war in the Crimea, where she earned so much glory by her efforts to assist the sick and wounded."

We would only suggest, in addition to these remarks of Dr Gross, that on account of the infrequent meetings of the county and district medical societies, the work could be prosecuted with greater advantage by the local medical societies in all of the smaller cities or villages, where members can have ready communication with each other, and where it would be found easy, if desired, to secure the aid of benevolent men and women outside of the profession to organize and render any pecuniary or other material aid that might be found necessary. Will not the local medical societies in such places as Joliet, Aurora, Princeton, Springfield, Bloomington, Jacksonville, Peoria, Rock Island, Quincy, and others in Illinois, and in all similar centers of population in other States, take this subject under serious consideration? It is certainly worthy of their full attention.

NOVEL MODE OF BLEEDING—The latest mode of blood-letting is given in a late number of the *British Medical Journal* by Dr Charles Coppinger, who relieved a serious cerebral congestion by introducing the aspirator needle into the external jugular vein and abstracting at first four ounces of blood, and half an hour later six ounces more. The patient was a fat and plethoric lady fifty years of age.

THE TEXAS COURIER-RECORD OF MEDICINE—We have received the first number of this new monthly journal. It is edited with spirit and enterprise by Drs F E Daniel and E L Stroud, Fort Worth, Texas.

THE AMERICAN PUBLIC HEALTH ASSOCIATION—We again remind our readers that the next annual meeting of this important national organization will commence on November 13, at Detroit, Michigan, and continue in session several days, during which papers will be read on some very important subjects. A full attendance is expected.

AN UNHEALTHY CITY—The annual death-rate in St Petersburg, Russia, is stated to be 51 per 1,000 of the population, which is more than double the death-rate in the principal cities.

SANITARY CONDITION OF THE SUEZ CANAL—According to the statements in a recent number of the *Pall Mall Gazette*, the Suez Canal is made the receptacle of the sewage and waste water from the stations and towns along its course. And as the water in the canal is stagnant, being very little moved either by currents or tides, it has become very foul and offensive, and appears to be causing much sickness among those who are either delayed in transit or are residing on its banks. This is not encouraging to those who contemplate traveling in that direction.

THE two most common pathological conditions are inflammations and fevers. The changes that take place in the former have been described minutely and in detail. They were determined by experimental research. Somewhat slowly the more complex phenomena characteristic of fever are being similarly observed, and their significance ascertained. The latest contribution to the experimental study of fever that we have seen, is the work done by Dr. Walter Mendelson in the Physiological Institute of the University of Leipzig¹. He attempted to determine what influence fever, artificially produced, might have on the size of the kidney. The fluctuations in its size were determined and recorded by the oncometer and onconograph of Roy. The experiments were conducted with care, but a description of the details need not be given here, as it is to the results that we wish to call attention. Any changes that may occur in the size of the kidney must be due to congestion or depletion in a greater or less degree, therefore the onconograph really recorded in these experiments the vascular condition of the organ. It was found that whether fever was produced by the injection of fever-producing agents into the blood, or by subjecting the animal to a high heat in a close box, there was a progressive diminution in the volume of the organ during the rise of bodily temperature. In other words, as pyrexia increased the kidney became more and more anæmic.

To illustrate. On the onconographic record, the bodily temperature being 38.8° C., there appears a uniformly undulating line. At a temperature of 42° C. the undulations are not so marked, although still quite uniform. At 44° the record shows an almost straight line. The amount of blood lost by the kidney was estimated in each experiment, and varied from 7.88 per cent. to 32.49. It was also found that by severing the nerves connected with the kidney, no change occurred in it during a rise of temperature.

Almost no change in the size of the organ occurred, also, when the spinal cord was severed towards the head, although if the sciatic was strongly stimulated a slight contraction might be caused. These nerve lesions were produced in the attempt to ascertain whether the changes were due to peripheral or central irritation. The most conclusive experiment on this point was probably that of heating only the blood that flowed through the carotids into the brain. It was then found that almost immediately a contraction of the kidney occurred and a rise of general arterial pressure. It was therefore concluded that in all probability the contraction of the blood vessels, and consequent contraction of the kidney, was due to the stimulation of the central nervous system, by the abnormally hot blood circulating through it.

Knowing that the blood-supply to the kidney is diminished, we can more readily than ever understand why the secretion of urine is lessened under the same circumstances. Dr. Mendelson also thinks that the presence of albuminuria in many fevers may be accounted for, by supposing that the anæmia of the kidney causes such changes in the renal epithelium as to permit the passage of albumen from the blood through it. But in many fevers, even when considerably contracted, albumen is not present in the urine. In meningitis and cerebritis it is certainly not commonly found, and yet these diseases are often characterized by high temperatures, especially about and within the head. If albuminuria in fever be due to the renal anæmia alone, we would expect it to be of common occurrence in these diseases, for in these, too, in accordance with Dr. Mendelson's experiments, we would naturally expect a decided anæmia of these organs. Is it not probable that the albuminuria of fevers is to be explained, in part, at least, on the ground of material changes in the blood albumenoids? Recently, Semmola, of the University of Naples, has been experimenting on the artificial production of albuminuria. He finds that an over-supply of readily diffusible albuminoids will cause its appearance in the urine. This, however, does not happen, at least to the same extent, when other forms of albumen are used.

Whether anæmia, and consequently a shrinkage of the kidney, are accepted as present in all fevers, their existence in the acute fevers produced in the laboratory is of interest. May not similar changes take place in other glandular organs, as for instance the pancreas, under the same circumstances, and be the cause of the imperfect digestion, as well as of other symptoms characteristic of fever?

¹ On the Renal Circulation During Fever, by W. Mendelson M.D., of New York. *Am. Jour. Med. Sci.*, October 1883.

BOOK REVIEWS

THE ESSENTIALS OF PATHOLOGY—By D. TOD GILLIAM, PHILADELPHIA, P. BLAKISTON & CO

This is a small book of about 300 pages, in which is compactly stated the generally accepted facts of pathology. Unsettled questions have generally been avoided, the object not being to supplant the larger works on this subject, but to present the facts of pathology concisely, and in the way which the author's experience has shown him to be best. In most respects the subjects treated of are well described and fairly well illustrated. Two faults may be pointed out in regard to the illustrations. Although they are to be found in other works, and evidently have been copied no mention is made of the fact. There is also nothing to show how many times the specimens from which the cuts were made had been magnified.

The two first chapters are devoted to a general consideration of disease and to normal histology. Under the latter head only the cell and its common properties and functions, together with the intercellular substance, and a few lines descriptive of the structure of tissues in general, are treated of. In the next two chapters is taken up the consideration of constructive and destructive processes in disease. Chapters on infiltration, metamorphosis and death follow. In the four succeeding chapters mechanical and functional derangements, fever, inflammation and tumors are discussed. Several chapters are then devoted to new formations in different tissues. Separate chapters are devoted to the pathological states of the commonest tissues and chief organs.

A POCKET BOOK OF PHYSICAL DIAGNOSIS OF THE HEART AND LUNGS FOR THE STUDENT AND PHYSICIAN. By Dr Edward T. Bruen. Second Edition. P. Blakiston, Son & Co. Philadelphia.

This is a most excellent book. It treats with fullness sufficient for all ordinary purposes of the physical diagnosis of diseases of the organs of the thoracic cavity. The descriptions of physical signs are clear and their explanation is well given. The few illustrations are of a useful character. A chapter is devoted to the sphygmograph and its relation to heart diseases. The fact that a second edition has been demanded shows that the profession has recognized its good qualities. Although of a convenient size it deserves a more dignified title than that of a "pocket book."

INDEX CATALOGUE OF THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE, UNITED STATES ARMY. Authors and Subjects. Vol. IV. E—Fizes. Washington: Government Printing Office, 1883. 4° [12] 1033 pp., muslin.

Dr Billings, in his report of presentation of this volume to Surgeon-General Crane, states that it contains 4,802 authorities, representing 1,926 volumes and 3,885 pamphlets. It also includes 12,361 subject-titles of separate works and pamphlets, and 48,977 titles of articles in periodicals.

The titles in the four volumes now published of the Index Catalogue represent, author titles, 35,431 titles, 24,967 volumes, 27,479 pamphlets, subject titles, 41,483 book titles, 149,737 journal articles, and 4,335 portraits.

This volume is most voluminous in titles on the subjects of the ear, education, eye, and fevers—the latter (fevers) having about 300 pages devoted to it alone.

DOMESTIC CORRESPONDENCE

CAMBRIDGE, MASS., October 4, 1882

EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

Dear Sir—In the weekly number of this journal under date of September 22 appears an original article entitled "Epidemic Jaundice Among Children," by Alex. Y. P. Garnett, M.D., Emeritus Professor of Clinical Medicine in the National Medical College, Washington, D.C. After considering the subject at some length the author reverts to the "influence of the nervous system as one of the causative agents in the question of jaundice." Here he mentions several factors which he regards as having an important bearing on the etiology and origin of such an epidemic. These for the most part I do not now care to consider, but there is one statement made which deserves at least a passing notice, it is this: "The influence of anger upon the saliva of animals, transforming a harmless secretion into an active poison." Again, the author says, "Evidence is not wanting to prove that even rabies canina has been produced by the bite of an enraged dog which was in all respects healthy." Now, some few years since I was summoned as an expert witness on both sides, of a case brought before the Supreme court of this State, where a lad died of an undoubted attack of hydrophobia caused by the bite of a dog. The child was bitten some two months previously, and was treated by a physician at the time. The animal alleged to have bitten the boy was produced and exhibited at the court. The dog was sportive or playful, and showed no signs of disease. Scarcely one of the many accomplished physicians called on either side ventured to offer the opinion that a bite of any animal, however enraged, unless at the time affected with rabies, could produce hydrophobia in man, although a great effort was made by learned and astute counsel on the part of plaintiff to show that such a result might follow. The literature of the subject was quite thoroughly considered by the court, as the various experts on either side were not only examined by counsel as to their personal experience and observation of this affection, but also as to their knowledge or acquaintance with the different authors who have written upon the subject of rabies and hydrophobia. The chief justice who presided took great interest in the case, and offered every opportunity for a thorough consideration of it. The prosecution appeared, and the defense appeared, and the case was decided. The result was that the child was not found to have been bitten by a dog which appeared in the case.

DOMESTIC CORRESPONDENCE

[OCTOBER,

drophobia, to show that the saliva of the enraged animal, otherwise healthy, could impart hydrophobia in man, but a subsequent work of Fleming touching the same subject seemed wholly to have invalidated that statement. Owing to sickness and death of the senior counsel of the defense the case was dropped indefinitely. Now, what I would like to inquire in view of these facts is, whether the writer of the article referred to, or any one of the readers of your valuable journal has any facts or reliable data (not theories or opinions) tending to show that hydrophobia can be produced in man by the bite of an enraged animal which is in all respects healthy. Very respectfully,

AUGUSTUS P. CLARKE, M.D.,
693 Main Street, cor Bigelow Street

EDITOR JOURNAL AMERICAN MEDICAL ASSOCIATION

Having been for twenty-five years a victim of hay-fever, and having been compelled to suffer all the torments of this disease, sitting in a chair for sixteen consecutive nights in order to get a modicum of sleep and rest, and having ransacked the whole literature of hay-fever as known in the English language, as far as I could obtain it, I am, as you may well imagine, much interested in anything that appertains to this inscrutable and abominable disease. No living man, who is not a victim, can appreciate the agony of hay-fever. Allow me to say that so far as twenty-five years can give a man authority to speak, I say that it is my opinion that no remedy has as yet been found, no, not so much as even a palliative for genuine hay-fever. For the last twenty-five years half of the materia medica has either gone through my nose, down my throat, or has been applied externally with this mournful result, *nothing*!

It is my opinion that for the cure of genuine hay-fever, as yet nothing is known. I write thus, as in the last number of the JOURNAL Dr Phillips lauds belladonna as a specific. I have tried belladonna to its utmost limit of safety, and either he never saw a genuine case of the disease, or is mistaken somewhere, for allow me to say that so far as my experience goes, nothing can cut short this disease. I have corresponded with half a hundred of victims and tried to learn their treatment, and the most intelligent all agree that they have to fight the thing through or leave in time to escape its attacks. My own opinion is that those who can cure hay fever have never seen a genuine case of it, but have mistaken it for a case of common cold.

O'Fallon, Ill
C. HIXSON, M.D.

WHO DOES THE STEALING?

TO THE EDITOR Dr Casebeer, in introducing the subject of his interesting paper, mentions that Prof A A Smith lectured at Bellevue Hospital Medical College on "The frequent repetition of doses of medicine." The lecture referred to, though embracing the consideration of what is purely within the domain of scientific medicine, has been made to serve the purpose of a certain class of irregulars, in their endeavor to prove that their "school" is correct, in all

things, and that the "old school" has a last accepted Homœopathy, pure and simple. As an instance of this tendency on the part of irregulars to belittle the profession, in the estimation of the outside world, I quote the following, clipped from the *Microcosm*, a well known scientific journal, and widely circulated among teachers and clergymen.

"To the Editor In the April number of your valuable journal, Dr G A Stuart says 'The regular profession throughout the whole civilized world challenge him as they have challenged Hahneman, and any of his disciples to his proofs (referring to the only true law of therapeutics, as discovered by Hahneman) Isn't it rather late in the day to utter such stuff, even by a so-called regular, when they are every day stealing the remedies of homœopathy, as witness the lecture delivered recently at Bellevue College by Dr A A Smith? Homœopaths are the only physicians who claim to administer medicine according to its well known law of cure, and not even futh is needed to demonstrate its truth."

"A P BOWIE, M.D."

It is by such apparently logical arguments as the above that the world at large is influenced by irregulars, from the quack who patents his wisdom to those who "glory in their conflict with dogma." In deed such arguments would seem to prevail in some of our medical societies, where strong position is at times taken against a practitioner who perhaps unintentionally violates the code, though the ones who accuse him are only too ready to affiliate with men who, kicked out of the back door of the profession, ride into favor upon the triumphal car of some popular "pathy" and are eagerly invited to be "one of us." If homœopathy, or any other irregular practice can grow into favor in a few years, surely there is little need that our young men should pursue long courses of study at reputable colleges. If the proper thing is "to consort with the pathists," students of medicine may as well pass through a term at some happy-go-lucky institution, rest quietly until an anti-code committee reports successfully, and then claim position with the elect.

If those who in professional circles advocate the claims of homœopathy, be sincere in the performance of a supposed duty, we should pity and seek to enlighten them. If, on the contrary, they are proven to be merely the advocates of expediency, we should despise them as they are known to be despised by those with whom they would affiliate. That there are many who "know not what they do," I may mention that when the subject of appointing a committee on revision of the code was brought up before the St. Louis Medical Society, one or the oldest members stated that he had frequently responded to the request of a lady practitioner for consultation, though the lady a graduate of an irregular school. He qualified his assertion—in response to my inquiry—by saying that he "did not stay long at a time."

At that meeting I took the position that homœopathy, as such, had no place in American practice, that he who gathered shekels under a confessedly false name was not sincere—which is a milder word

than dishonest I need not tell the "Nestor of American medicine" that Hahnemann, though making it the corner-stone of his system, did not discover the law of *similia*. Every scholar knows that 2,000 years before Hahnemann, Hippocrates advised and practiced the use of contraries and similars, and proved their results upon the living body. Haller also "proved" the action of various remedies, and is credited by Hahnemann with this half of the "law." But singular to relate, the "Messiah of Medicine" is strangely silent as to Paracelsus, who, two centuries before his time, announced to the world the doctrine of similars, using the legend, now so popular, "*similia similibus curantur*" (vide Ed. Geneva, 1658). The same "Monarch of Medicine" in his "*Fragmenta Medicina*" (page 168, et seq.), herds a lengthy paragraph with these words "*Simile, similibus eura, non contrarium*," and then goes on to prove this, by the varied actions of mercury, sulphur, and salt.

So much for the vaunted discovery of the "law." Now, as to its permanency. Before Hahnemann died his system had ceased to bind his own disciples, despite the fact that he had pronounced his "law" unchangeable, and declared anathema against what he called "the practitioners of the new mongrel system, a mixture of homœopathic and allopathic processes." Thirty five years later, Dr Wyld, vice president of the British Homœopathic Society, wrote to Dr W. B. Richardson (*London Lancet*, 1877,) as follows: "First, that the views of Hahnemann are often extreme and incorrect. Second, that Hippocrates was right, when he said that some diseases can be treated by similars and some by contraries, therefore it is unwise and incorrect to assume the title of homœopathist. Third, although many believe that the action of the infinitesimal in nature can be demonstrated, its use in medicine is practically by a large number in this country, all but abandoned."

The "Great Master" ignored scientific medicine and surgery while theorizing to such an extent as to leave no record of the cases treated by him. Yet every year the leading practitioners of his system flock to the European clinics and to "regular" schools in America to perfect themselves in rational treatment. If then we are to credit homœopathy with an existence separate and apart from Hahnemann, its prophet, where is the "law" and where the "stealing" by Professor Smith? The fact is incontrovertible that in America, as well as in England, the mixed system, so much abhorred by Hahnemann, is the general practice of his followers. That the "law" itself is not infallible is evidenced by the fact that the itch—whose spiritual "manifestation" was the cause of gout, and cancer,—is due to a very material parasite, which a short treatment, with a very common agent, potentially sends to its long home. Lead palsy, as well as consumption, and many other ills that flesh is heir to, are due to microscopically demonstrable materiality, the spiritual factor in all such cases being manifested after death has claimed the case.

As to the choice of remedies the true physician is not bound by any so called law, but is free to select

that which is best for his patient. If a homœopath finds a remedy that I think well of I will use it, so if a negro should discover a medicinal plant I would use it—as I have already used one medicinal product of the plantation. The physician gives as freely as he takes, else the homœopath's occupation would be gone, and when it comes to "stealing" Prof. Smith can retaliate with a vengeance.

Respectfully yours,

P. H. CRONIN, PH. B., A. M., M. D.

49 N. State street

FOREIGN CORRESPONDENCE

PARIS, Sept. 25, 1883.

The annual meeting of the French Association for the Advancement of Science was this year held at Rouen, the medical section of which was presided over by Dr. Jules Rochard, member of the Paris Academy of Medicine and Inspector General of Hospitals in the Marine Department. Some of the papers that were read on the occasion were most interesting, but even of these I can only select a few, and send you but brief extracts.

Dr. Gallard, a well-known gynecologist, made a communication on the physiology of menstruation—a subject, he said, that required to be revised, as there were two currents of opinion entertained in the profession as to its mechanism, some admitting the correlation that existed between the menstrual flow of blood and ovulation in the light of cause and effect, whilst others looked upon the presence of the two phenomena as a simple coincidence, even although they may occur simultaneously. After having gone over the history of the question from the days of Hippocrates to the present time, he referred to the writings of Negrier, who was the first to point out the correlation that existed between menstruation and ovulation. According to this author the latter always accompanied the former, and, in support of his theory, he mentioned the fact that when the sexual or conceiving period of a woman's life ends, menstruation ceases, the inference therefore is that the one is the consequence of the other. The adversaries of this theory declare that there is no necessary correlation between the two acts as menstruation had taken place in women who were deprived of ovaries, whether congenitally or by operation as in ovariectomy. To which Dr. Gallard replied that he never met with a case of congenital absence of both ovaries in which the menses took place, and if after ovariectomy there have been recurrences of uterine hemorrhage, yet even these, though they may be frequent, do not constitute menstruation properly so called as there is no periodicity in the flow of blood which does not last so long, and the quantity of the latter is by no means what is observed in the normal function. Dr. Gallard then referred to the experience of Dr. Scan, the eminent surgeon and ovariectomist, who remarked that he has known uterine hemorrhage in other capital operations besides organ or region operat-

remarked that in some of the cases in which incision took place after ovariectomy there was no doubt that the operation was imperfectly performed, that is to say, there was a small portion of one or both ovaries left behind, which, even if it be a single follicle, is sufficient to perpetuate the function of menstruation.

(Owing to the extensive employment of hypodermic injections in general practice, and the critical remarks called forth in consequence, Dr Voisin thought proper to defend this method of treatment against the attack leveled against it, is he considered it excellent, and that it was rendered dangerous only in ignorant hands and by its abuse. Dr Voisin, who is physician to the Salpêtrière Asylum for female inmates, has had great experience with this method, and wished to impress upon the meeting the great advantage it possessed over all other methods, particularly in the treatment of insane and nervous subjects. The effect obtained was powerful, precise and offered no inconvenience, provided the necessary precautions were observed and the injections be performed by the medical man himself or by other competent person, but the patient should on no account be allowed to do it himself or herself, as it leads to abuse, particularly when narcotics or anodynes are prescribed.

Dr Briot, of Rochefort, made some observations on intermittent fevers, in that report town. He found that intermittent fever, notwithstanding the continual running up of the soil, has considerably diminished within the last fourteen years but pulmonary phthisis has become more frequent. The granular form was observed even among confirmed malarious subjects, in whom the spleen was considerably enlarged, and this condition co-existed with extensive cavities in the lungs. Typhoid fever had not made its appearance for some time, it least epidemically, though it is always more or less prevalent in the town. Pneumonia of the typhoid form has also been rather prevalent. The author of these observations intended to prove that intermittent fever, tuberculosis and typhoid fever were not incompatible with one another.

At the close of the meeting a proposition was made to the effect that measures should be taken for the constitution of a board of health on the basis of those existing in most civilized countries, which should be competent to decide all matters connected with public hygiene, instead of having them, as at present, under the control of several departments. The expediency of such a measure had already been officially represented several times by the Academy of Medicine and other learned bodies, but the Government have hitherto shown a deaf ear. The consequence is, questions of such vital importance as that of public sanitation are still left in the hands of the Municipal Council, the Prefect of the Seine, the Prefect of Police and the Minister of the Interior, who surely are no more competent to deal with such matters than medical men would be to direct the movements of a fleet.

The next annual meeting of the Association is to be held at Blois, in August, 1884, and Prof Verneuil is president.

Intelligence has been received of the death of M. Thuillier, one of the members of the French Medical Mission referred to in my letter of the 8th of August, which was sent out to Egypt at the instigation of M. Pasteur to investigate the nature of the cholera that has been raging in that country for nearly three months. M. Thuillier was not a medical man as he was supposed to have been, but a doctor of sciences. He nevertheless showed great aptitude for biological researches, which attracted the notice of M. Pasteur, who employed him in his laboratory. The medical mission, composed of four members, left Paris about six weeks ago, and on their arrival in Egypt they dispersed themselves in different quarters to carry on their researches independently of one another. M. Thuillier contracted the disease in a hospital and succumbed in a few hours at the early age of twenty-seven, and, it may be said, a victim to duty in the midst of the deepest regret, not only by all who knew him, but his death is considered a great loss to science in general, and to biological science in particular.

NECROLOGY.

SLAUGHTER, ALFRED E., M.D., was born at Orange Co. Court House, Va., August 24, 1839, died of consumption, at his home in Gordonsville, Va., Jan. 11, 1883. Alfred L. Slaughter, M.D., was the son of Dr. J. I. Slaughter, of Orange Co., Va., educated at Col. Hanes' school, Buckingham Co., Va., took his degree in medicine in 1860, at the University of Virginia, and commenced his professional life at Gordonsville in 1861, but was soon called to help the army of Northern Virginia, where he remained until the "fateful day at Appomattox" (except when he was detached in charge of some of the hospitals), when he returned home and resumed his practice, which he continued until near the time of his death.

An appreciative and lengthy report on his professional life and character was prepared shortly after his death by the Piedmont Medical Association. This, with a series of resolutions, was printed in the *Virginia Medical Monthly* and by the newspapers of Orange Co.

F. D. CUNNINGHAM, M.D.,
Virginia

MISCELLANEOUS

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM SEPTEMBER 28, 1883, TO OCTOBER 5, 1883.

Tilton, H. R., Major and Surgeon assigned to duty as Post Surgeon at Fort Wayne, Michigan (Par 4, S. O. 183, Department of the East, September 28, 1883).

Brechemin, Louis, Captain and Assistant Surgeon relieved from duty at Fort Columbus, N. Y., and assigned to duty at Fort Wadsworth, N. Y. (Par 5, S. O. 183, Department of the East, September 28, 1883).

THE Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY

VOL I

SATURDAY, OCTOBER 20, 1883

No 15

ORIGINAL ARTICLES

AN EXPERIMENTAL INQUIRY INTO THE CAUSES OF THE VARIATIONS OF PULSE-WAVE VELOCITY AND DURATION OF THE CARDIO-AORTIC OR PRESPHYGMIC INTERVAL OB- SERVED IN MAN.

BY A. T. KEYS, M.D.

"In every truth attained there is utility, either at hand or among the certainties of the future"—PAGET

The work of the present essay was devised and prosecuted with the conviction that the points to be established were of interest and importance, and that the graphic method afforded the facility for their successful study.

Our knowledge of velocity of the pulse-wave has all been acquired within a comparatively recent period, and still later are our acquisitions in regard to the interval between the beginning of ventricular systole and rise of the aortic pulse. Previous to the

present investigation, it had been determined that the pulse-wave velocity and duration of the cardio-aortic interval

were both subject to variations, but the real causes of the variations remained to be determined by experimental inquiry and observation.

If, in the following pages, we make frequent reference to our own previous observations, it is because they are in the line of the present investigation, and have led up to the extension we hope to develop.

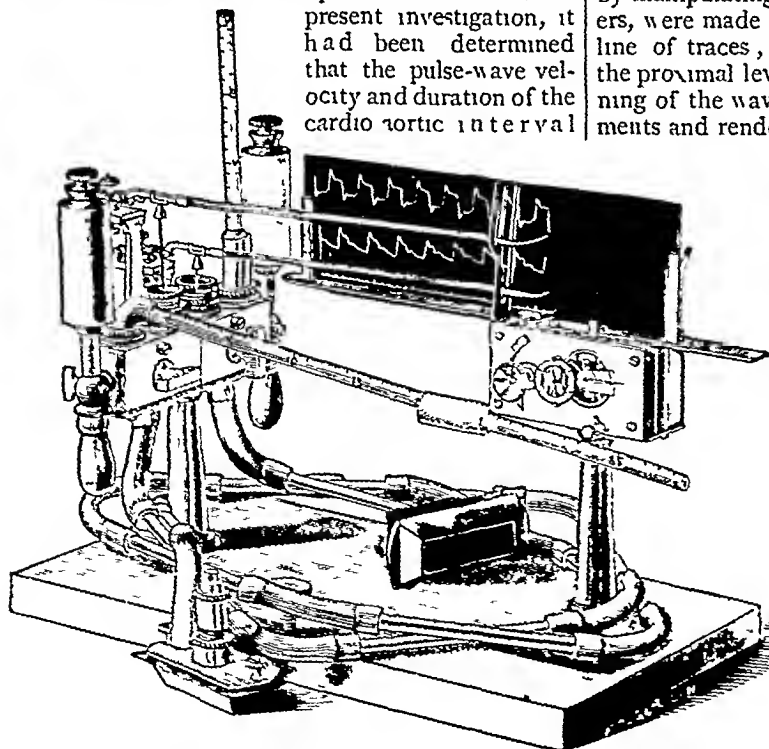
The experiments were made with the author's apparatus for simultaneous inscriptions (see cut), which, as known, differs from Marey's, notably in transmitting by water instead of air. This mechanism, on account of convenience and accuracy, was found admirably adapted to the work in hand. Also the author's accustomed method was followed in the measurements of the time intervals, and preparation of the slides for illustration.

Whilst the movements were being written, the chronograph also wrote the time in fifths of seconds. Immediately after an experiment, the slide was re-passed, and while halted at selected points, the levers, by manipulating the membrane or tube of the explorers, were made to describe their curves across the line of traces, and it was usually arranged so that the proximal lever would cross at or near the beginning of the waves, in order to simplify the measurements and render the time-relations more apparent to

the eye. These lines are synchronous signals cutting the traces at the same instant and always indicate the exact time-relation to each other of the movements recorded.

The measurements were carefully made on the slides, by means of a transparent isinglass scale, ruled in 1-100ths of an inch. With this measure and the chronogram, and a magnifying glass, it was easy to compute the time in fine fractions of a second. This was done, and the results written on the slides.

The engravings are faithful reproductions throughout. The lines were photographed on wood, using the glass slides as negatives, and then the engravings were made with skill, without deviation from the work, that it



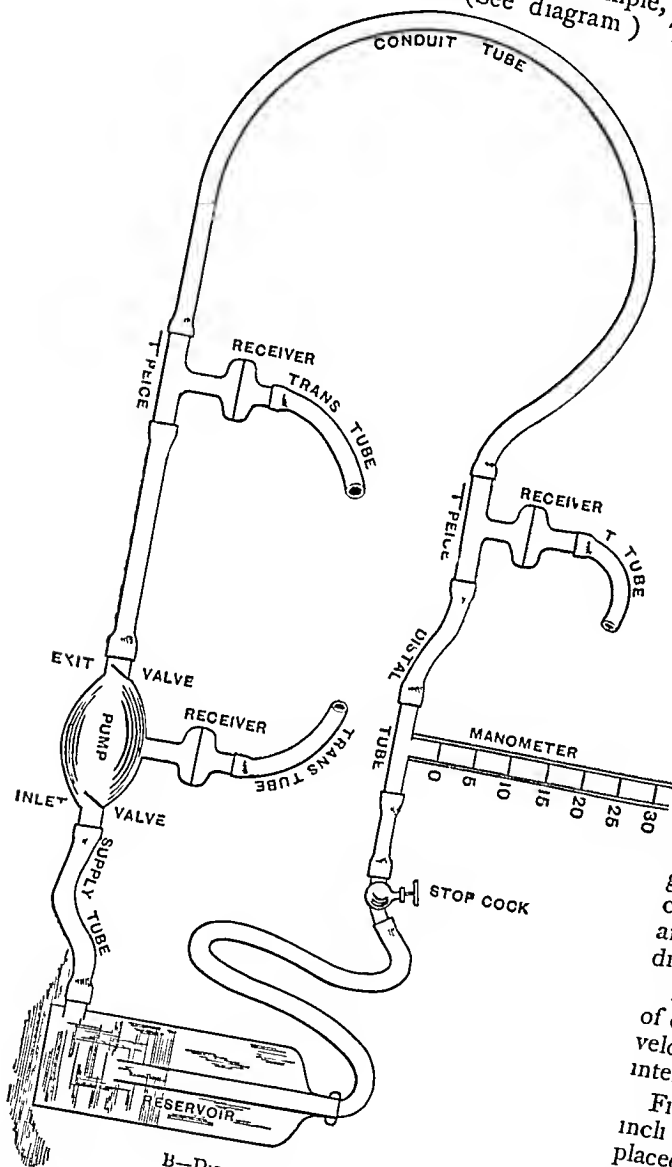
A—Compound Sphygmograph or apparatus for simultaneous inscriptions.

made on the glasses are found to hold good in the reproductions

CHAPTER I

EXPERIMENTS ON THE SCHEMA UNDER VARIOUS CONDITIONS, BEARING UPON THE CAUSES OF THE VARIATIONS OF PULSE-WAVE VELOCITY OBSERVED IN MAN

The schema employed was very simple, yet satisfactory in its working (See diagram) The tube



B—Diagram of Schema

or system conducting the liquid waves connected at either end with one of the horizontal limbs of a hollow T piece. The opposite limb of the proximal T connected with a tube twelve inches long, leading to the egress neck of an elastic bulb or pump. The convenient length leading to a reservoir. The opposite limb of the distal T connected with a flexible tube, three feet long, provided with a stop-cock one

foot from its outer end, and communicating near its middle with a water manometer graduated in inches. The vertical limbs of the Ts communicated with the transmission tubes of the recording apparatus, through the media of circular chambers, each divided transversely by a delicate elastic diaphragm, said receptacles being substituted for the ordinary explorers, and here termed "receivers".

Thus the reservoir supplied the liquid, the pump sent the waves along the conduits, the stop-cock regulated the discharge, the manometer measured the pressure, the T pieces and receivers permitted the waves to act directly upon the recording mechanism, and the latter registered their form and time as they manifested at the points of observation. The exit tube could be placed to discharge again into the reservoir, or a separate vessel. The pressure could be raised to any height by working the pump with the exit stop-cock closed, or partially so. A current as swift as desired could be created through the tubes by elevating the reservoir and opening the exit tube placed to discharge at a lower level. Different conduit tubes could readily be placed between the T pieces. The form of the waves could easily be varied by the manner of working the pump. The conditions could be changed at will, and the graphic apparatus would faithfully record the results.

It will be observed that our experiments on liquid waves in elastic tubes differ from Marey's and others—first, in the character of the graphic apparatus, second, in transmitting the waves directly from the interior of the schema, and third, in the close showings and estimates of the time intervals and wave velocities as manifesting under a variety of conditions.

These experiments were essential to the success and completeness of results aimed at in the investigation, and, as will be seen, the results when comparable with those of other experimenters, are sometimes confirmatory, other times contradictory.

PROBLEM I To determine the influence of tubes of different degrees of stiffness or elasticity on the velocity of the liquid waves sent along their interior.

First experiment A glass tube, three sixteenth inch bore, and six feet long, bent in C form, was placed in communication with the two Ts of the schema. The water in the reservoir was at such level that the pressure in the tube measured four inches by the manometer. The exit stop-cock was open, and the pump worked rhythmically by the hand with medium quickness and force. The graphic apparatus in order, with smoked glass in position and chronograph running, the carriage was started, and traces of the waves simultaneously obtained from the two points. Immediately the carriage holding the slide was passed through again, halting it where the upper lever would be opposite, or nearly, the beginning points of the proximal waves, and then striking both levers across the line of the traces. These lines made by the lev-

ers serve to indicate the distance between the beginnings of the proximal and distal waves, and this distance measured¹ on the corresponding part of the chronogram gives the time difference between them. In this experiment, Fig 1 shows the result. The

Fourth experiment A lighter tube than last, $\frac{3}{16}$ inch bore and same length, employed. Result in Fig 4. Formula, $\frac{7}{12}$ of $\frac{1}{5} = \frac{1}{12}$ second, wave velocity 51 feet per second.

Fifth experiment A tube of last description was

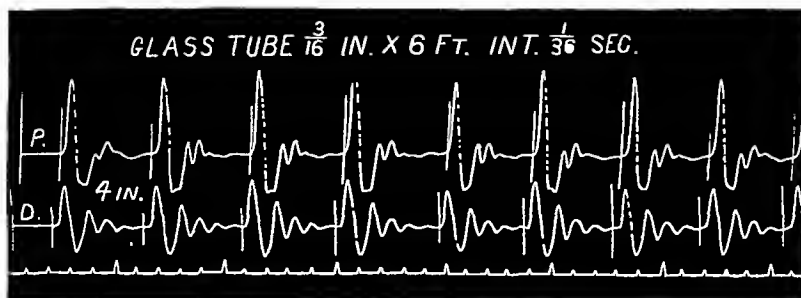


FIG 1.—Glass tube $\frac{3}{16}$ inch bore 6 feet long interval measured at $\frac{1}{36}$ second

retardation of the distal waves on the proximal is seen to be extremely short. It seems to measure about $1\frac{1}{2}$ hundredths of an inch, while the fifths of seconds measure 11 hundredths, which would give a time difference of $\frac{1}{36}$ second, and a wave velocity over the six feet of distance of 216 feet per second.

Second experiment A thick, firm rubber tube of the same bore and length was substituted for the glass, and the experiment under all other conditions conducted precisely as in the preceding. The result is shown in Fig 2. The measurement is placed

made very soft and lax, and expanded to $\frac{3}{16}$ inch bore, by steeping in gasoline, and then put in experiment. The first pair of waves of Fig 5, traced under parallel conditions with the others, shows the result. Formula, $\frac{21}{33}$ of $\frac{1}{5} = \frac{1}{5}$ second, wave velocity 31 feet per second.

Sixth experiment Not being able to find in the market tubes of the thinness desired, we prepared one from a strip of delicate rubber cloth, by cementing the edges. This tube, $\frac{3}{16}$ inch bore and two feet long, placed in experiment, gave Fig 6 as result.

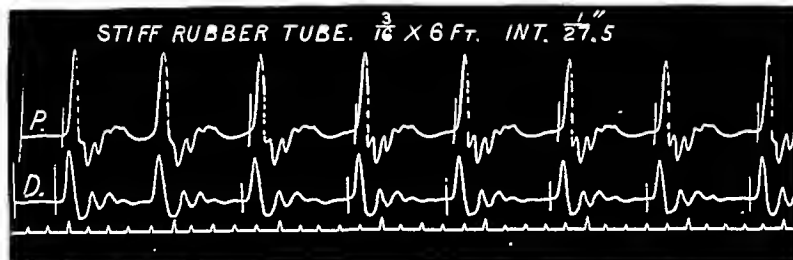


FIG 2.—Stiff rubber tube $\frac{3}{16}$ inch bore, 6 feet long int $\frac{1}{27.5}$ sec

at $\frac{21}{33}$ of $\frac{1}{5} = \frac{1}{5}$ second, and which gives a wave velocity of 165 feet per second.

Third experiment A softer and more yielding tube of the same bore and length was employed. Fig 3 shows the result. Formula, $\frac{5}{12}$ of $\frac{1}{5} = \frac{1}{12}$ second,

Formula, time-difference $\frac{1}{14}$ second for 2 feet, would make $\frac{3}{4}$ second for 6 feet, wave-velocity 28 feet per second.

Seventh experiment A chicken's intestine, averaging $\frac{1}{4}$ inch diameter and two feet long, placed in

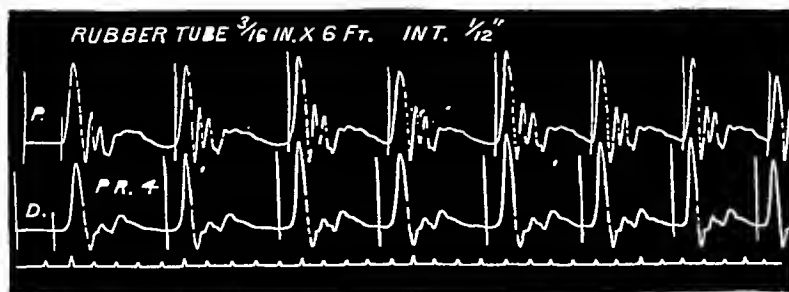


FIG 3.—Ordinary rubber tube $\frac{3}{16}$ inch bore 6 feet long int $\frac{1}{12}$ sec

wave velocity 72 feet per second

¹ Measurements are readily made by hair dividers and a hundredths inch scale but more conveniently still by the use of a transparent scale of fine divisions.

experiment, gave Fig 7. T. difference $\frac{1}{8}$ sec equal to $\frac{3}{8}$ second for 6 feet, wave-velocity 16 feet per second.

Eighth experi-

inch diameter, and 18 inches long, with the branches tied, gave Fig 8 Time-difference, $\frac{1}{85}$, or $\frac{1}{17}$ second for $1\frac{1}{2}$ feet, equal to $\frac{1}{17}$ second for 6 feet, wave-velocity 1275 feet per second This arterial tube was very soft and elastic, but apparently firmer than the chicken's intestine We shall see further on that size of tube is an important factor of modification

and tracings taken at various pressures, and many experiments made, but always with the same negative result Fig 9 was taken with the chicken gut, before described, at 10 inches pressure The time-difference measures the same, viz $\frac{1}{10}$ second, under the opposite modes of impulsion Another illustration of this fact is shown in Fig 11

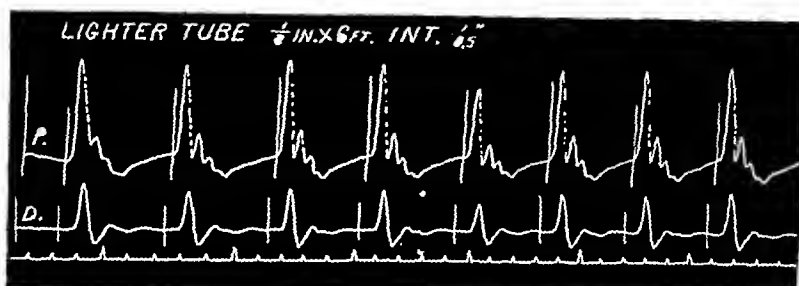


FIG 4—Lighter tube, $\frac{1}{8}$ inch bore 6 feet long int $\frac{1}{85}$ sec

These experiments demonstrate in a specific manner, that the velocity of liquid waves in elastic tubes is proportional directly to the stiffness, inversely to the elasticity of the tube traversed And as bearing upon the rate of pulse propagation in living arteries, they indicate the important modifying influence

This negative result was unlooked for, and is at variance with observations announced by Marey Nevertheless, in view of our numerous and varied and carefully conducted experiments, to the end of testing this point, we are compelled to accept the fact as shown and stated



FIG 5—Tube softened in gasoline $\frac{1}{8}$ inch bore, 6 feet long int $\frac{1}{52}$ sec

which the state of the arterial walls as to stiffness or elasticity must exert upon the same In the next chapter will be given actual verifications from man of a positive ratio between the velocity of the pulse-wave and degree of arterial stiffness

PROBLEM II—To determine whether the velocity

Obviously the fact teaches that the rate of pulse propagation is not modified directly by the manner of the heart's action, whether it beats quick, launching a sharp wave, or slow, sending a sloping wave, the pulse-wave velocity along the arteries is all the same

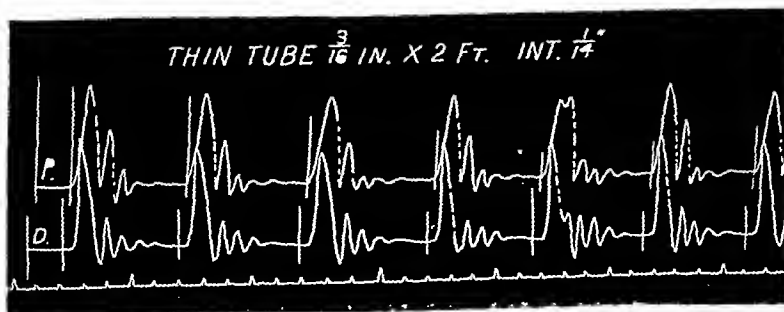


FIG 6—Thin rubber tube, $\frac{3}{16}$ inch bore 2 feet long, int $\frac{1}{14}$ sec for 6 ft

of liquid waves in the interior of elastic tubes is modified by the mode of impulsion

Experiments—Under stated conditions whilst tracings were being taken, the pump for one part of the run was worked with quick and for another part with slow impulsion Different tubes were employed

PROBLEM III—To determine whether the velocity of liquid waves in the interior of elastic tubes is modified by the size of the tube

It was first sought to solve this problem by the use of ordinary elastic tubing found in the shops, and so a tube $\frac{3}{16}$ inch bore and six feet long was put in ex-

periment to obtain results comparable with those of Fig 3. Fig 10 was obtained. The time-difference is $\frac{1}{2}$ second.

But this experiment and result is not sufficiently conclusive, inasmuch as the larger tube was notably stiffer than the smaller, and this quality, as we have

To the same end Figs 7 and 8 may also be compared, for, although the gut was laxer than the artery, the fact that the latter gave a slower rate of transmission shows the result was due alone to the larger size.

From this positive result we learn that, other things



FIG 7 —Chicken's intestines average $\frac{1}{4}$ inch diameter 2 feet long int 1.3 sec = 3.9 sec for 6 feet

seen, would of itself cause a swifter propagation of the waves. However, as the time intervals in the two tubes were the same, the speeding effect of stiffer walls must have been counter balanced by a slowing effect of larger size.

To more successfully test the point it was nec-

being equal, the pulse-wave travels slower along larger and faster along small arteries.

PROBLEM IV —To determine whether the velocity of liquid waves in elastic tubes is modified by a longer or shorter distance from the pump.

For this solution the receivers were placed on a

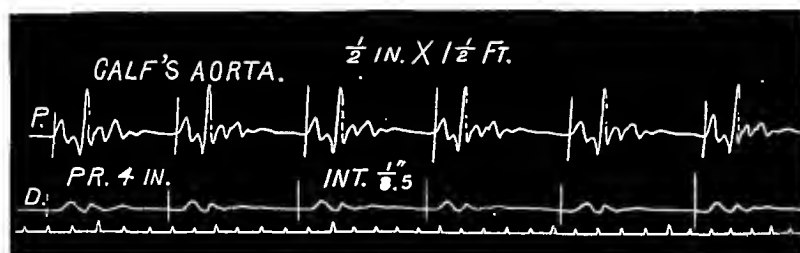


FIG 8 —Calf's aorta average $\frac{1}{2}$ inch diameter 1 and $\frac{1}{2}$ feet long int 1.85 sec
4.85 sec for 6 feet

essary to experiment with tubes of different diameters but of the same thinness and elasticity. Accordingly a tube one-half inch diameter and two feet long was prepared from the same rubber-cloth and in the same manner as the tube $\frac{3}{16}$ inch diameter, which gave Fig 6. An experiment with this tube gave

continuation of the $\frac{3}{16}$ inch rubber tube, each six feet further from their original positions, and the waves traced at this remoter distance under like conditions as obtained in the production of Fig 3.

Fig 12 shows the result—time difference 1.12 second, the same as in figure 3, which represents the

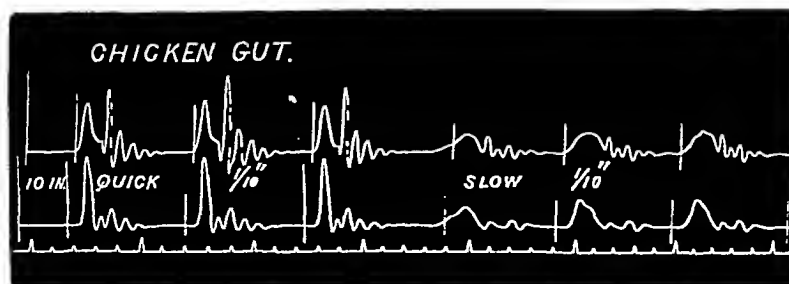


FIG 9 —Chicken gut showing negative effect of opposite modes of impulsion

Fig 11, in which the time-difference is 1.9 second.

It will be noticed that the interval in Fig 6 is 1.14 second, so this comparative experiment shows that wave propagation is slower in larger and faster in smaller tubes. Compare also Figs 13 and 14

nearer distance. However, it appears that the points of the waves are slightly further removed from the beginnings as the distance from the pump increases.

We are informed through this experiment that distance from the heart neither accelerates nor retards the velocity of the beginnings of pulse waves.

PROBLEM V —To determine the influence of different pressures on the velocity of liquid waves in elastic tubes

First experiment —Result shown in Fig 5, where with the softened tube the pressure was successively raised for each wave traced, as shown in the figure. It will be observed that the time-difference is the

Fifth experiment —The calf's aorta, before described, employed and traces taken at different pressures. Fig 15 shows the result.

Intervals respectively 2-17 second at 4 and 10 inches pressure, 2-21 second at 20 inches pressure, 2-25 second at 30 inches pressure, and 2-29 second at 40 inches pressure. Another positive result

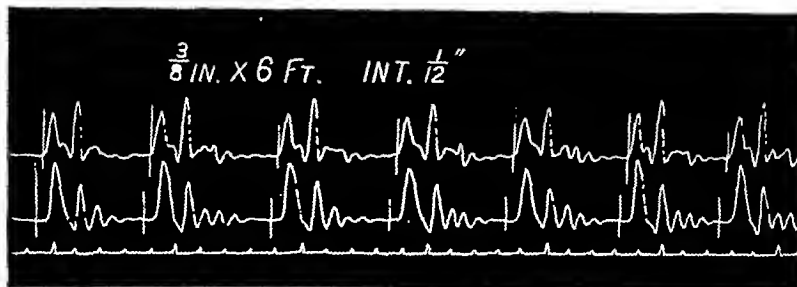


FIG 10 —Tube 3/8 inch, 6 feet long int 1/12 sec Compares with figure 3

same at 4, 30, 40 and 50 inches pressure respectively

Second experiment —Result shown in Fig 7, where with the chicken gut, after the first waves taken at the usual four inches, the pressure was successively raised as indicated. The result here is seen to be positive, the time-difference at four inches is 1/16

Reviewing these experiments it is shown, the modifying influence of different pressures is small at best, and requires for development considerable difference of pressure in tubes very soft and elastic. The thin rubber tubes, delicate as they were, failed to make manifest any difference in velocity, while the animal

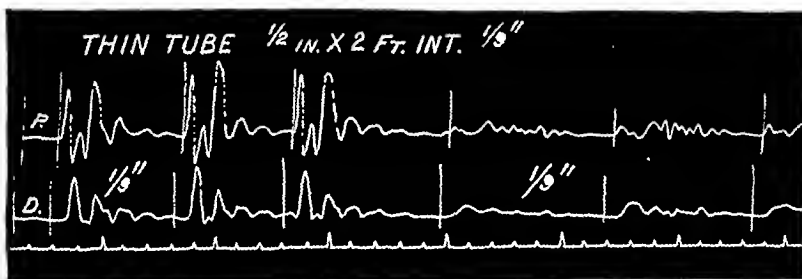


FIG 11 —Thin tube 1/2 inch diameter, 2 feet long int 1/16 sec Compares with figure 6

second, at 30 inches 1-15 second, at 40 and 50 inches 1-18 second

Third experiment —Thin rubber tube, 3-16 inch, at different pressures. Result in Fig 13

The showing is negative, the time-difference running 1-14 second throughout

tubes, although with thicker parietes, really more easily yielding, showed increased velocity coincident with marked increases of pressure

These results have an important relation to the question of influence of blood-pressure on pulse-wave velocity. They indicate that variation of blood

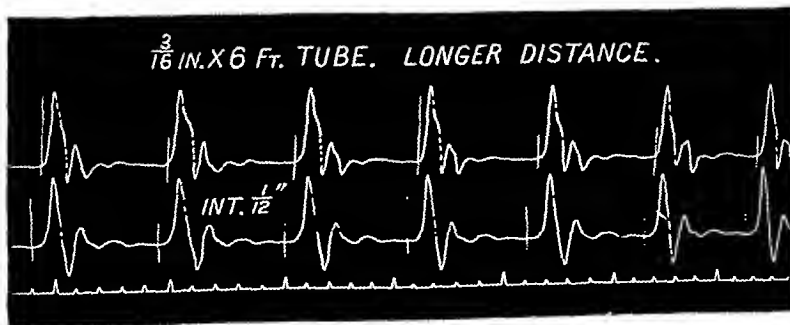


FIG 12 —Longer distance from pump int 1/12 sec Compares with figure 3

Fourth experiment —Thin 1/2 inch rubber tube, at different pressures. Fig 14 gives the result

Showing again negative, the time-difference measuring uniformly 1-9 second at 4, 20, and 30 inches pressure, while at 40 inches the interval is really a little longer

pressure tends to produce variation of pulse-wave velocity directly as the pressure, but in such pressure changes as occur in the organism and mixture of modifying agencies with which they act, it would be expected, in view of these results, that such effect would be of uncertain manifestation and slight when

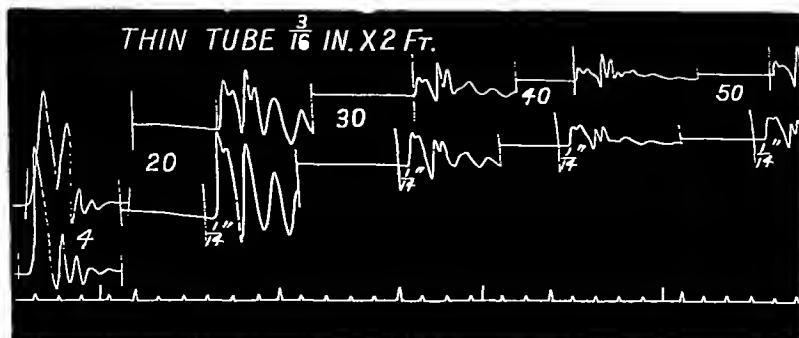
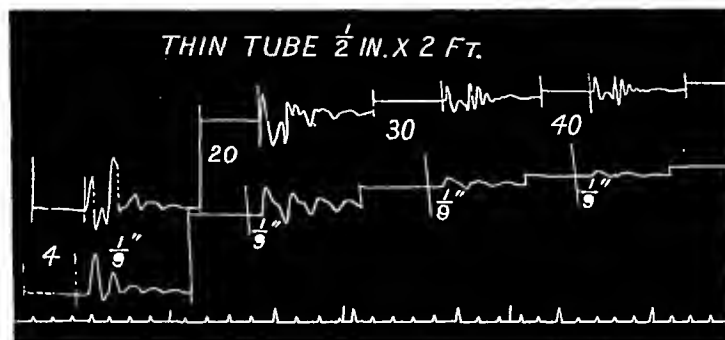
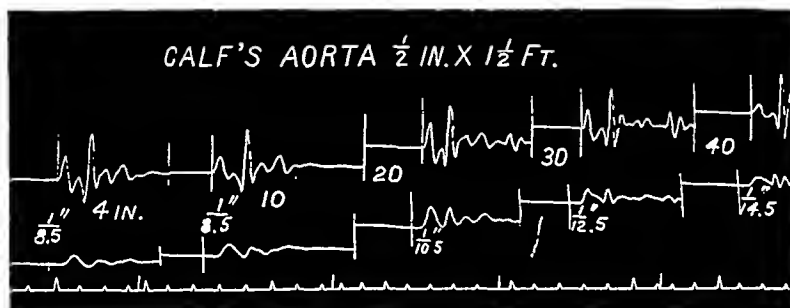
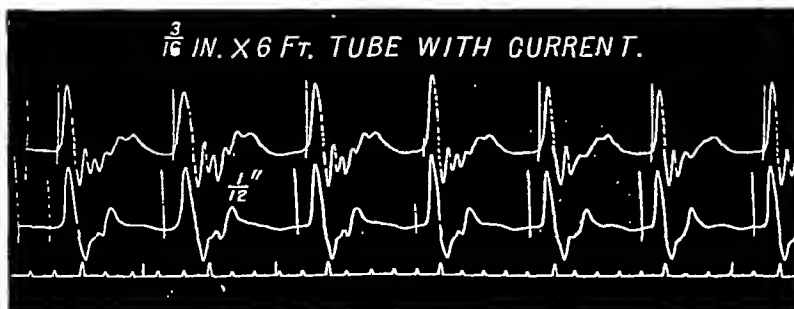
FIG 13— $\frac{3}{16}$ inch thin tube at increasing pressures showing negative resultFIG 14— $\frac{1}{2}$ inch thin tube at different pressures showing negative result

FIG 15—Calf's aorta at different pressures showing swifter velocity with higher pressure

FIG 16— $\frac{3}{16}$ inch 6 feet tube with a current showing negative effect

observed According to these experiments the current teaching on this point requires modification

PROBLEM VI—To determine whether the velocity of liquid waves in elastic tubes is modified by rapidity of current through the tubes

Hitherto our experiments have been made with the liquid at rest in the tubes, except as sent forwards

By this we may know that, whether the blood in the arteries flows fast or slow, the velocity of the pulse-wave is not affected

PROBLEM VII—To determine whether the velocity of liquid waves in elastic tubes is modified by branches issuing therefrom

Two rubber tubes, each $\frac{1}{16}$ inch bore and 6 feet

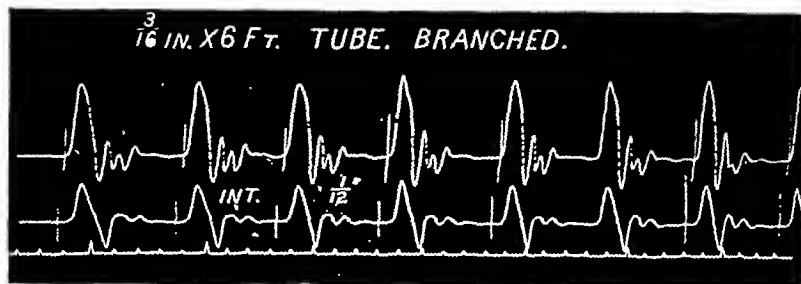


FIG 18 —Showing negative effect of branches on main tube

at each impulsion of the pump To test the effect of a continuous current on the velocity of waves implanted upon it, the reservoir was elevated thirty-six inches (the supply tube lengthened accordingly), and the distal tube left to discharge freely into a vessel on the table below and, whilst thus the water was

long, were branched on the $\frac{3}{16}$ inch 6 feet tube a few inches below the upper receiver, their distal ends turned into the reservoir Traces of the waves were then taken with the result shown in Fig 18, which signals a negative effect

Again, the $\frac{3}{16}$ inch 6 feet tube was branched on

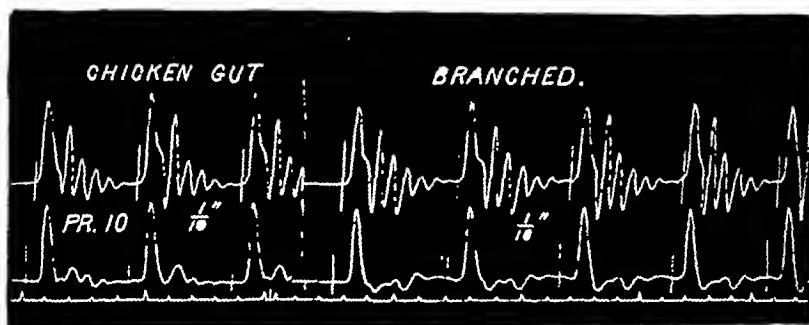


FIG 19 —Chicken gut, with branch showing negative effect

flowing rapidly through the tube, the experiment was made Fig 16 gives the result with the $\frac{3}{16}$ inch six-foot elastic tube The time difference, 1-12 second, is the same as that of figure 3, given by the same tube with the liquid at rest

Fig 17 is the result of a parallel experiment with

the chicken's intestine, and Fig 19 obtained at 10 in pressure, the first part without, the second part with, communication with the branch It will be seen that the effect is again negative, the intervals measuring 1-10 second under both conditions

In application of this experiment, in seeking to

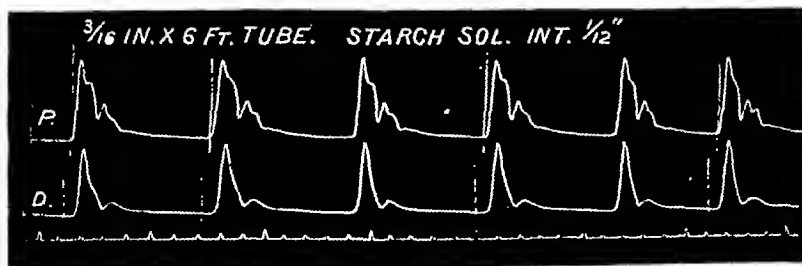


FIG 20 — $\frac{3}{16}$ inch 6-foot tube with solution of starch negative result

the $\frac{3}{16}$ inch 2-feet thin rubber tube This compares with Fig 6, given by the same tube with the liquid at rest It will be observed that the time differences are the same, viz, 1-14 second

Liquid waves, then, travel along elastic tubes with the same speed, whether the liquid be at rest or freely flowing

determine the cause of different rates of pulse-propagation for different articles, we may now exclude as of no effect the different conditions as to branches

PROBLEM VIII To determine whether the velocity of liquid waves in elastic tubes is modified by the consistence of the liquid

A solution of boiled starch, as thick as would flow through the tubes, was substituted for water, and experiments made as with water. Fig 20 shows the result with the 3-16 inch 6 foot tube, comparable with Fig 3, and Fig 21 shows the result with the chicken gut, which is comparable with Fig 7. Results negative.

From this experimentation we learn that waves are delayed by great obstruction of the tube, and that the delay occurs at the point of obstruction, and is not caused by lessening of the rate of transmission below.

The bearing of these facts upon the influence of arterial obstruction in modifying the time of the

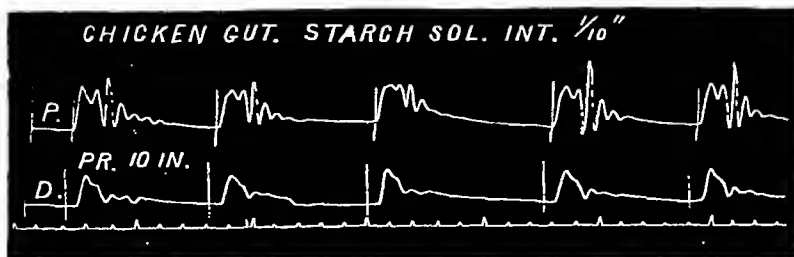


FIG 21—Chicken gut with solution of starch negative result

This fact teaches that whether the blood be dense or watery, the pulse wave velocity is all the same.

PROBLEM IX To determine the effect of obstruction of the tube on the time of the wave below the obstruction.

In Fig 22, with the 3-16 inch thin tube, the waves

pulse wave, is at once apparent.

PROBLEM X To determine the effect of an elastic pouch communicating with the tube, as an aneurism with an artery, on the time of the wave below the pouch.

A thin rubber bag, easily distensible, was placed in

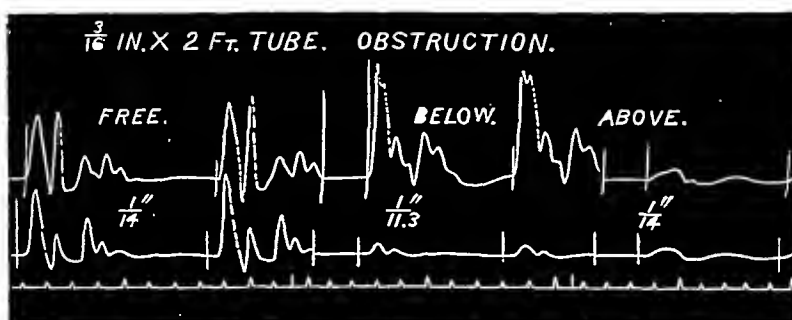


FIG 22—3-16 inch thin tube showing the effect of obstruction of the tube

were traced first under the usual conditions, and then, whilst the tube was compressed just below the upper receiver, and then again just above. The measurements are 1-14 seconds with tube free, 1-11.3 seconds with obstruction below, and 1-14 second with obstruction above, the receiver. These fairly repre-

relation with the 3-16 inch 6 foot tube, so that communication between it and the tube could be opened or closed at will. Tracings were then taken, first with the sack shut off, and next with the sack in free communication. Fig 23 shows the result. The retardation is sufficiently striking.

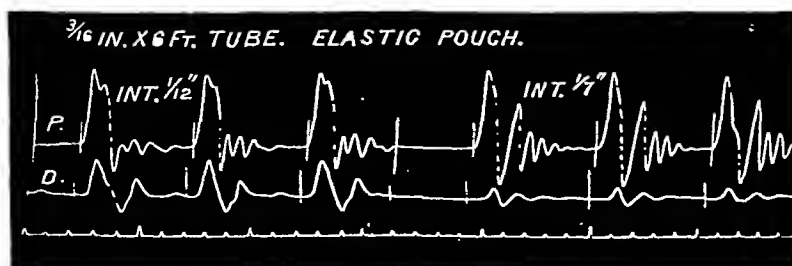


FIG 23.—3-16 inch 6-foot tube with elastic pouch

sent the results of many similar experiments. The delay is small, but always discernable when the passage of the liquid is greatly obstructed below the near receiver. Obstruction above never causes delay. Also, we found the same result when the obstruction was created by plugging the tube so as to leave a very small aperture for passage of the liquid.

Next the pouch was placed in the same manner in relation with the chicken-gut, and the experiment proceeded with in the same way. Fig 24 shows the result, which is negative as to delay.

Again, the pouch was associated with the 3-16 inch thin tube, and in continuity, instead of by lateral

communication, and to make the experiments strictly comparable a section of the same tubing of the same length as the pouch was interposed for the normal experiment, and that with the pouch above the receiver. First, the pouch was placed closely above the upper receiver and traces obtained shown in the first part of figure 25, next, it was removed and, the

our subject, and given somewhat in detail the experiments and results relating thereto, the following resumé of the facts arrived at will now be in order

- 1 The velocity of liquid waves along the interior of elastic tubes is proportional directly to the stiffness, inversely to the elasticity of the tube traversed
- 2 It is not sensibly modified by the mode of im-

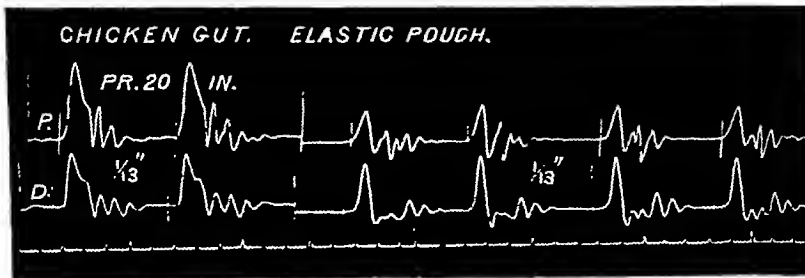


FIG 24—Chicken gut with elastic pouch

original connection having been restored, the middle part was obtained, third, it was placed immediately below the receiver (the section of tube having been removed), and the latter part obtained

It will be noticed that the interval with the sack above the receiver, and that under normal conditions,¹

pulsion, a quick wave and a slow wave being transmitted along the same tube in equal times

- 3 It is proportional inversely to the largeness of the tube
- 4 It is not sensibly modified by different distances from the pump

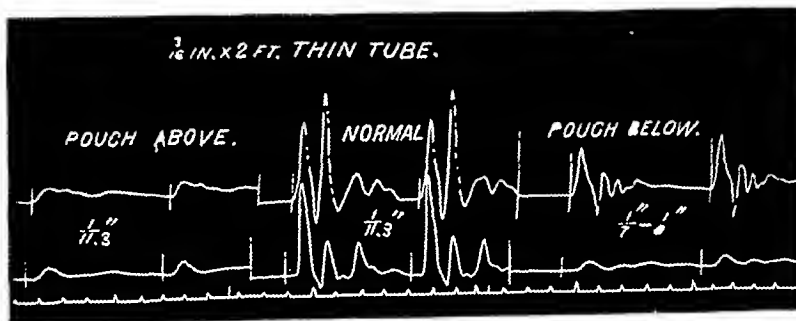


FIG 25—Thin 3 16 inch tube with elastic pouch in different positions

without the sack, measure the same, while that with the sack below the receiver is considerably longer

In the first experiment the pouch was notably more distensible than the tube and so absorbed the wave to the extent of delaying its time of appearance at the lower receiver, while in the second experiment the contrast in yieldingness between the pouch and gut was not great, and so no retarding effect was contributed

The third experiment demonstrates that the wave-delay incident to an elastic pouch begins and ends at the pouch, and that the wave which passes through travels on with undiminished velocity. It shows also in connection with the others that the retarding effect is more easily produced by a sack in continuity than by one with lateral connection

We appreciate the significance of these facts in their bearing upon the subject of delay of the pulse produced by aneurism

Having thus experimentally investigated the problems that seemed most pertinent to this branch of

- 5 It increases with increase of pressure of the liquid in very soft yielding tubes, but in all other elastic tubes, it shows no modification
- 6 It is not modified by rapidity of current through the tube
- 7 It is not modified by branches connected with the main tube
- 8 It is not modified by liquids of different consistence
- 9 The distal wave is notably delayed by obstruction of the tube, although its velocity of propagation is not appreciably diminished thereby
- 10 The distal wave is delayed by communication with an elastic pouch more easily distensible than the tube, while if the pouch and tube are nearly equally yielding, there is no increased delay, yet the velocity of the distal wave is not perceptibly diminished from this cause. Hence,
- 11 The increased delay of the distal wave in arterial obstruction and distensible pouch arises from arrest at the site of obstruction and site of the yielding pouch

¹The longer normal interval than those before shown for the same tube is attributed partly to the length of the tube having been increased by so much as the sack and its connections would increase it and partly to relaxation of the tube from use and soaking in water

DR. PARRISH'S CASE OF THE PORRO-MULLER OPERATION.

The following is the full report of the case discussed in the proceedings of the Obstetrical Society of Philadelphia given in another part of the JOURNAL as furnished by the Secretary of the Society —[ED]

SALLIE SMITH, a deformed dwarf, applied for admission to the Philadelphia Hospital in April, 1883. One of the internes placed her among the pauper women of the out-wards of the almshouse. There, all the conditions surrounding the dwarf were such as to contribute to her physical deterioration. The women in that part of the institution are unduly crowded—the ventilation is entirely inadequate, and the food of a character unfit for a pregnant woman. Her presence in those wards was unknown to any of the visiting obstetricians of the hospital until June 15, when Dr. Pauline Root, one of the internes, ascertaining her pregnancy and surroundings, conveyed the information to me. I at once had her transferred to the obstetric wards where she was especially provided for and her condition carefully investigated. She was a native of Philadelphia. She was unable to give her age—although dwarfs usually appear to be older than they actually are, yet from what could be learned of her past life, from evident atheroma of her blood-vessels and from her appearance, I concluded that she must be over forty years of age. Her parents were poor, were born in Ireland, and died in this city during her early infancy. She had been told that her father died of heart disease, and her mother of insanity at the menopause. She did not know how or by whom she was cared for in her early childhood. She attributed her deformities to a fall supposed to have been received when she was a very small child. She was unable to walk until she was seven years of age. Her occupation, from the time she was first able to work, has been that of a house servant. Menstruation began at sixteen years, continued at the usual periods, but rather profusely until the beginning of pregnancy.

She could not recollect ever having been seriously ill. I learned from some of her acquaintances that for a number of years she had been of intemperate habits, repeatedly becoming intoxicated, and indulging in promiscuous sexual intercourse. Her bad habits led to exposure to inclement weather, and, with the influence of cold and damp, doubtless led to the disease of the kidneys, to which I shall again refer.

She was pregnant for the first time. The date of the last menstruation was given by her differently at different times. At one time she would give the 1st of October, and another time, the middle of October as the date when menstruation last ceased.

She felt movement of the child about the middle of February, though she was also uncertain in reference to the date. The *fundus uteri* reached nearly to the ensiform cartilage, and I concluded that the full period of pregnancy would be attained about the 10th or 15th of July,

She was fifty-one inches high, the head small, mind

sluggish, and memory defective, yet she was not an imbecile. The clavicles and bones of the upper extremities, though small, presented no special deformities, they did not show the usual rachitic incurvations. The right thorax was very prominent posteriorly and laterally, the left thorax markedly depressed posteriorly and laterally. Both lungs, but more especially the left one, were greatly encroached upon by the deformed thoracic walls. The heart was displaced upward and to the left, its apex being on a level with and external to the left nipple. Pulse 86, of good volume, but intermittent. Bowels moved daily, urination frequent. Urine contained one-quarter albumen, and also granular and hyaline tube-casts. The eyelids were slightly oedematous, but oedema was not recognizable in any other part of the body. The patient complained of frequently recurring frontal headache. At times things seemed darkened to her, and dark specks appeared before the eyes. She had never experienced convulsions, but occasionally had slight fainting attacks.

The vertebral column was markedly curved. The upper third of the dorsal region was slightly convex posteriorly, the lower two-thirds markedly convex posteriorly and also decidedly convex to the right. The lumbar portion was convex anteriorly and to the left. A left anterior lumbar convexity, compensating for a right posterior convexity of the dorsal region. In the erect position, the lower ribs and the crests of the ilia seemed in contact, and the left iliac crest about one inch higher than the right. Posteriorly there was a deep depression at the sacro-vertebral articulation, and the posterior-superior spines were unduly approximated. Externally examined, the sacrum, in its upper two-thirds, seemed directed nearly horizontally backwards.

External measurements with a pelvimeter showed about fifteen centimeters or six inches between the posterior surface of the top of the sacrum and the anterior surface of the top of the symphysis pubis. Normally this measurement is about eight inches. Deducting three inches from the external conjugate of six inches, would have made the internal or true conjugate three inches. The distance between the anterior-superior spines measured twenty-five centimeters, or about ten inches, the normal being ten and one-quarter inches. Between the normally widest portion of the crests of the ilia the distance was a little less than that between the anterior spines—that is, a little less than ten inches, the normal being eleven and one-half inches. The measurement between the crests being less than that between the spines, indicating the pelvis to be rachitic, though it will be seen that the pelvis was not the more usual, typical rachitic one. The external measurements did not indicate decided transverse narrowing of the true pelvis, though internal manual examination did show decided transverse narrowing.

Repeated internal examination showed the promontory to be jutting forward, and the anterior surface of the sacrum to be nearly straight, and directed almost horizontally backwards. The symphysis pubis was correspondingly inclined forward and backward.

The oblique conjugate measured three and one-fourth inches, the depth of the symphysis pubis one and a half inches, hence, according to Lusk, deducting three-fourths of an inch from the oblique conjugate, I estimated the true conjugate to be two and a half inches. The transverse diameter of the superior strait was evidently considerably shortened, but I could not satisfactorily determine the degree of the shortening. The antero-posterior diameter of the excavation was taken to be less than the corresponding diameter of the superior strait, and all the measurements of the outlet less than the corresponding ones of the superior strait. The pelvis was diagnosed to be a generally contracted one, with proportionally greater diminution of the conjugates, and the general contraction increasing from above downward, so as to produce a somewhat funnel-shaped pelvis. The vaginal canal was narrow, and the os uteri high up, and the uterine fundus markedly tilted forward. The abdomen was remarkably pendulous.

When the patient first came under our observation, pregnancy seemed to have reached about the end of the ninth lunar month, according to the most probable interpretation of the symptoms, and of the information she gave. The question arose, would it be best to produce a premature labor at the end of the ninth month, with a generally contracted pelvis, and a true conjugate of two and a half or two and three-quarter inches? I decided that should a premature labor be attempted under such circumstances, craniotomy, or some other similarly dangerous operation, would be eventually necessitated, and that the dangers of such operation would be increased by the addition of those incident to the production of premature labor. Delivery with forceps, or by podalic version, seemed out of the question. There was a choice between craniotomy, symphysiotomy, Cæsarian operation, gastroelytrotomy, and the Porro operation.

In such a pelvis, craniotomy would have been difficult and tardy, and has been shown, especially by Parry, to be attended with a mortality of mothers too large to compete with abdominal section.

I did not prefer the Cæsarian operation, because of its excessive mortality to mothers in European hospitals, and because of the six Cæsarian operations performed in hospitals in this country, all were fatal to the mothers. A condition almost essential to recovery after Cæsarian operation is rarely met with, even after normal deliveries, in hospitals. I refer to sufficient retraction of the uterus. A flabby uterus, after a Cæsarian operation, leads to blood-poisoning and to general peritonitis. The experience of many hospitals, as also *a priori* reasoning, would make the Cæsarian operation of very questionable justification in hospitals, especially in large maternities, and more decidedly still in general hospitals. The Philadelphia Hospital is not only a general hospital, but is also part of a large almshouse. Gastroelytrotomy and symphysiotomy have given good results in the hands of a few operators, the former especially in America, the latter in Europe, but both operations have been performed with comparative infrequency,

and the question of their respective merits cannot be determined by the very limited number thus far performed.

I do not desire to discuss *in extenso* here the general question of the relative value of the different operations performed for the relief of advanced pregnancy in very small pelvis. Among the considerations inducing me to adopt the Porro operation, with Muller's modification, were, the smaller mortality to mothers attending this operation in hospitals, and the opportunity it allows the operator of selecting daylight, and of securing the needed assistants.

The patient was placed under the influence of quinine, of Basham's mixture, and of occasional doses of the compound jalap powder. Woollen underwear and proper diet were secured for her. She was isolated from all lying-in women. Her condition did not improve, however, as the time for operation approached, but on the reverse, a persistent œdema of the face, more troublesome headache, and more marked disturbance of vision, with an increasing quantity of albumen in the urine, all pointed to steadily increasing uræmia. The time chosen for the operation was what was supposed to be the end of the thirty-eighth week of pregnancy. A large, well-lighted, well-ventilated room in the Children's Asylum, remote from the obstetric wards, and one that had for years been used as a private parlor, was selected in which to operate, and in which the patient was to remain after the operation. This room was divested of curtains, carpets, and furniture, its walls and floor were thoroughly scrubbed with carbolized water. The room was then refurnished with chair, table, and a new bed. In short, every means was resorted to to improve, as far as possible, the unfavorable conditions incident to so large an institution as the Philadelphia Almshouse.

The members of the obstetric staff had agreed with me in the diagnosis of the patient's deformities, and also as to the propriety of the performance of a Porro-Muller operation. The patient was also kindly examined prior to the operation by Drs Albert H. Smith, Robert Harris, M. O'Hara, and Anna Broomall. After receiving a full explanation of the nature of the operation, the patient gave her entire consent. The operation was performed on June 30, 1883, with the assistance of Drs Duer, Keating, Musser, Stryker, Montgomery, Clara Marshall, and Bernardy, all members of the obstetrical staff, and also with the assistance of Dr McLoughlin, warden of the hospital. There were present Drs S. D. and S. W. Gross, Ellwood Wilson, J. L. Ludlow, Albert H. Smith, Anna Bromall, J. H. Brinton, Hannah Croasdale, and other physicians. On the morning of the operation the room was carbolized with the spray, but the latter was not used during the operation. All instruments were kept in a two per cent carbolized solution, and Listerism, minus the spray over the patient, was in the different details observed. On the morning of the operation the patient received a general bath, and the bowels were moved by enema. A half hour before the operation she received two ounces of whisky. Dr Joseph Hearn, one of the surgeons of the hospital,

and an experienced anæsthetizer, kindly administered ether during the operation. After etherization the bladder was emptied with the catheter. An incision was then made in the median line of the abdomen 7 inches in length, extending from two inches above the symphysis pubis to about one inch above the umbilicus, passing to the left of the umbilicus. The slight bleeding from the lips of the abdominal incision was controlled by artery compressors before opening into the peritoneal cavity. The absence of intestine from in front of the uterus was ascertained by percussion before making the incision. The uterus was easily raised from the abdominal cavity.

Owing to the anterior lumbar curvature, and to the length of the incision, it was impossible to completely prevent the escape of intestines. After the uterus had been turned out, a protector made of two layers of flannel, with an intervening layer of protective silk, was placed over the abdomen, the object being to avoid chilling, and to prevent the escape of blood and other fluids into the peritoneal cavity. This protector, when used, was wrung from a warm carbolized solution. The next step was to place around the cervix the wire of an ecraseur, and to constrict the tissues in its grasp to such an extent as to stop all circulation of blood through the uterus without cutting through the peritonæum. This step required speed, care and judgment. The liability of a loop of intestine or of omentum to be caught by the constricting wire had to be carefully guarded against. Immediately that sufficient constriction had been secured, a short incision was made with a pointed bistoury through the antero-uterine wall down to the placenta, for the placenta proved to be attached anteriorly. The incision was then rapidly extended from near the neck to the fundus, with a probe-pointed bistoury, guided by two fingers of the left hand introduced into the incision. The blood pent up in the uterus by the constricting wire escaped freely, but did not enter the abdominal cavity. The incision passed to the external surface of, but not through, the placenta. The hand was immediately introduced into the uterus through the exposed membranes at the fundus, and the child quickly turned out, the placenta being in this manœuvre detached in main from the uterus. The cord was promptly tied and cut, and the child handed to Dr Keating. It was asphyxiated when delivered, and presented a very unpromising appearance.

It, however, quickly breathed and cried under the efforts of Dr Keating at resuscitation. The rapid resuscitation was effected by alternately dipping the child in basins of hot and of cold water. After removing the infant, the uterus, with both ovaries and both tubes, was amputated a half-inch above the constricting wire—this point was about at the internal os. It was then seen that the wire had completely controlled the circulation, and not a drop of blood escaped from the stump of the uterus.

The next step consisted in passing obliquely through the stump two steel pins five inches in length, one above, the other below, the wire. After this a strong carbolized silken cord was passed around the stump, in the line of the wire, and

partly tightened. The wire was then cut and removed, and the silk cord very firmly tightened and securely tied. Special care was given to the tightening of this cord and to the tying of a secure knot. The ends of the pins rested laterally on the abdominal walls, and under the ends, on each side, was placed a piece of sheet-lead. The stump was thus secured outside of the abdominal cavity, and rested at the lower angle of the wound. New carbolized sponges on handles were introduced into the peritoneal cavity, down into Douglas's pouch, but the entire cavity was free from blood or other fluid.

The abdominal wound was then closed by deep and superficial silver sutures. The deep ones were introduced so as to include the peritonæum. During the introduction of the deep sutures, flat carbolized sponges were introduced beneath the incision, so as to catch what oozing might occur from the needle punctures. The external portion of the uterine stump was brushed over with carbolic acid, and then invested with lint saturated with carbolized oil. A strip, two inches wide, of dry carbolized lint was placed on the incision, over this a few strips of rubber adhesive plaster were applied transversely, over these a thick layer of carbolized cotton, and over all a flannel binder. The patient was put to bed and surrounded with pans of hot water. Dr Montgomery took charge of the patient's general condition during the operation, and administered during its performance four hypodermic syringefuls of whisky. He reports that the time taken up in the operation, from the beginning of the abdominal incision until its complete closure, occupied forty minutes. During the operation the pulse ranged from 100 to 128, the greater frequency being during the making of the incision in the abdominal wall, and was probably due to impeded respiration. The constriction of the cervix had no appreciable effect upon the pulse. Soon after being put to bed, the pulse was 132, but in two hours was 108 per minute, and of good volume. The respirations during the anæsthesia became disturbed and imperfect, producing considerable cyanosis, and probably causing increased frequency of the heart's action.

The patient rallied well, as was shown by return to consciousness, by bodily warmth, and a fair pulse. For about sixteen hours her condition seemed very favorable, excepting that the kidneys had ceased to act. At the end of twenty-three hours there was marked change for the worse, the mind wandering, pulse 140, temperature 100° F. An inspection of the dressing at that time, showed some oozing from the stump—perhaps six ounces—but it had then stopped. An additional ligature was placed around the stump, and one of the uterine arteries was separately ligated, the other could not be found, the stump was also brushed over with Monsel's solution. There was no subsequent oozing. That there should have been any loss of blood in this manner was a surprise to me, as the original ligature was so very firmly tightened and secured, and had for a number of hours after reaction so perfectly controlled all bleeding. There was marked atheroma of the vessel.

of the stump, as was revealed *post-mortem*. After the twenty-third hour the patient grew progressively worse, became uncontrollable and delirious, had convulsive manifestations, and died in coma. There was no vomiting until twenty-six hours after the operation, and it recurred only once. She experienced but slight pain, and sulphate of morphia was given in slight quantity— $\frac{1}{4}$ gr hypodermically, soon after the operation, again $\frac{1}{6}$ gr at the end of eleven hours—and subsequently about the thirty-sixth hour, because of the great jactitation and the difficulty of keeping the patient in bed. The morphia was given hypodermically by Dr McLoughlin in such small amount that the coma could not have been due to it. Eight hours after being put to bed the urine was drawn with the catheter. Subsequently the catheter was introduced at different intervals, but on each occasion the bladder was empty, and it was also found empty at the *post-mortem* examination. Only three ounces of urine were secreted after the operation. The patient survived forty-two hours.

Dr John Gillispie made a careful analysis and microscopic examination of the urine secreted after the operation, with the following report:

The specimen of urine from the woman upon whom the modified Porro operation was performed was examined, with the following result:

The specific gravity was 1023, reaction decidedly acid. The urine was of a dirty, yellowish brown color, and contained a large amount of albumen (rather more than one-third).

The amount of urea contained in the urine received by me was 10.5 gr for the entire amount. Therefore, if only three ounces of urine were excreted in forty-two hours, the total amount of urea excreted would be about fifteen grains.

The sediment contained granular, hyaline, and epithelial casts, renal and bladder epithelium, and granular detritus and blood-corpuscles.

Dr Wile, the acting pathologist of the hospital, conducted the *autopsy*, and I extract the following from the pathologist's records:

On opening abdominal cavity several slight adhesions were found between the visceral and parietal peritonæum in the region of the surgical incision. Blood-vessels around incision markedly congested. No exudation or other evidences of general peritonitis.

Stomach and intestines distended with gas, spleen small, atrophic.

Left kidney. Considerable displacement, found between sixth and seventh ribs. Somewhat lobular, on surface pea-sized cyst, which extends somewhat into the cortical substance of kidney. Cortex reduced, the seat of parenchymatous, solid, interstitial change.

Right kidney. Position normal, shape altered, considerable flattening on upper surface, hilus very marked, capsule adherent, seat of parenchymatous change. Both kidneys in state of contraction.

Pelvis. One ounce of bloody serum in Douglas's pouch. Peritoneal and subperitoneal tissue the seat of considerable œdema.

Veins around vagina enlarged.

Cervix uteri virginal, orifice round.

Liver enlarged, fatty.

Thorax. On left upper anterior side pleura adherent.

Heart. Left side firmly contracted, right relaxed. Right auricle and ventricle seat of a firmly adherent chicken-fat clot. Left ventricle contained small amount of dark, slightly coagulated blood. Left ventricle markedly hypertrophied. Mitral valve, slight thickening. Papillary muscle considerably hypertrophied.

Lungs. Hypostatic congestion, œdematous.

Cause of death. Heart-clot.

Report of histological appearance of kidney. H Wile, M D.

The blood-vessels are for the most part congested, filled with corpuscles, and surrounded by a growth of connective tissue. The uriniferous tubules are found filled with cellular and granular debris. Some contain pigment, the result of slight hæmorrhages. The epithelium lining of the tubules is granular, and in some places in a state of proliferation, indicating a catarrhal process. The growth of connective tissue between the tubules and about the Malpighian bodies is more marked in some places than in others, and the interstitial process may be regarded as fairly established.

A careful measurement was made by Dr S D Lazarus and myself after the pelvic viscera had been removed, with the following result:

Superior strait,	3 inches
Conjugate	
Transverse,	4 "
Right oblique,	3 $\frac{3}{4}$ "
Left oblique,	4 "
Oblique conjugate,	3 $\frac{1}{4}$ "
Depth of symphysis,	1 $\frac{1}{2}$ "
Obstetrical conjugate,	2 $\frac{3}{4}$ "
Excavation	
Conjugate,	2 $\frac{3}{4}$ "
Transverse,	4 "

Upper four sacral vertebrae directed nearly horizontally backward, lower portion of sacrum and coccyx curved sharply forward.

Inferior strait	2 $\frac{1}{2}$ inches
Conjugate,	2 $\frac{3}{4}$ "
Oblique,	3 $\frac{1}{2}$ "
Transverse,	

A perpendicular to plane of superior strait is nearly horizontal, striking the abdominal wall about midway between umbilicus and top of symphysis.

A perpendicular to plane of inferior strait would strike the upper part of the third sacral vertebra.

The death of the dwarf must be attributed chiefly to the existence of interstitial and parenchymatous nephritis. She had rallied from the shock of the operation. There was no peritonitis, excepting in the immediate vicinity of the incision.

It was too early for septic poisoning to produce death, and there were no indications that such had occurred. The loss of blood had been trifling, and death occurred too soon to be attributable to exhaustion from this cause.

The acute and almost complete suppression of urine, the symptoms after the operation, the symptoms prior to the operation, and the results of examination of the urine and of the kidneys after death, all pointed to the diseased kidneys as the cause of the fatal result to the mother.

It is well to note that union had occurred throughout the entire extent of the abdominal wound. There were adhesions between the small intestines and the parietal peritonæum along the line of incision. The latter fact is of interest, viewed in the light of death in a few instances after laparotomy being attributed to strangulation of the bowel, due to constricting inflammatory bands.

The child was of small size, and died at the end of three weeks, of inanition.

THE SICKNESS OF THE COUNT OF CHAMBORD.

BY A CHEVALLEREAU

(From *La France Médicale*. Translated by Chas. H. Hunt, M.D., Stanwood Iowa.)

Prof. Vulpian, who was called to Frohsdorf during the last sickness of the Count of Chambord, has published in the *Gazette-Hebdomadaire* an account of the sickness, and the reflections on the case with which he was inspired. The affection, which was the death of the Prince, does not resemble anything that can happen to simple mortals, in no classical literature do we find anything near it.

It is this that appears interesting on viewing the principle phrases and following the very remarkable deductions that he has made.

Since two or three years, at the least, the health of the Count of Chambord, which up to that time had been excellent, commenced to change. The Count, however, each day pursued during the greater part of the year the pleasures of the chase, and in spite of an ancient fracture of the neck of the left femur that had produced a shortening and a certain degree of atrophy of the inferior member, in spite of considerable development of adipose tissue, he supported better than his younger companions the fatigues of the chase in the mountains.

During some four or five years previous, pressed by the need of diminishing his embonpoint, he was submitted to the system of Banting in all its rigor, and then in a few months he lost fifty pounds of his weight, but at the same time he felt a feebleness and perhaps some digestive troubles. Since this epoch he had been on two occasions seized with intense dyspepsia.

In the month of June, 1882, he made at Marienbad a new essay to diminish his adipose tissue, and against rheumatism, from which he had suffered two or three years previous. He then had some gastric troubles

which were considered grave, and which forced him to restrain, in a measure, the medication of Marienbad. The 22d of March last, while at Goritz, the Prince in mounting a carriage was suddenly taken in the superior and external part of the right leg with a sharp pain which was called by the physician "a whip lash," (*coup de fouet*) and which was attributed to a rupture of the plantaris muscle, or to a phlebitis. The pain after having persisted during many weeks disappeared, and on the 20th of May he returned to Frohsdorf, he weighed the day after 208 pounds.

Such is the history that M. Vulpian gathered regarding the last sickness.

Now comes the history of the strawberries which many political journals have seized upon to base a case of poisoning. The 13th of last June, the Count ate some strawberries for his dinner which had begun to spoil. The next day he had a slight indigestion with vomiting and diarrhoea. The 15th he was much better and took some fruit for dinner with his friends, and had a new attack of indigestion the day after, but this time with great intensity.

The appetite was altogether lost, and nausea was followed by vomiting, which was repeated a great number of times. He manifested great abdominal pain which was exasperated by the ingestion of aliments or drinks. The symptoms became more and more violent up to June 19th, the day that the Count decided to call Dr. Mayr, Physician of the Hospital of Neufstadt. Weighed the same day, the Count had lost since May 21st twenty pounds of his weight, the following days grew more aggravating.

Toward the 24th or 25th of June, Dr. Mayr, who made an examination of the abdomen each day, believed that he recognized the existence of a resisting tumor in the epigastric region, at the right of the median line. There could be seen at the surface of the abdomen in this region a rounded projection.

The 27th of June a consultation was held between Prof. Drasche, of Vienna, and M. Mayr. Both admitted the probability of the existence of a tumor in the region of the stomach, however, they desired to have recourse to the experience of Prof. Billroth, who came with them the 29th. Billroth hesitated between three hypotheses—an affection of the liver, a gouty gastritis, or a cancer of the stomach.

The patient continued to suffer cruelly, and vomited a great number of times in the twenty-four hours. The facial expression was greatly altered, and assumed a hippocratic aspect. It was then that the note of alarm appeared in *L'Union*.

The treatment prescribed by MM. Drasche and Mayr brought at least a little ease. The pains were less sharp, the vomiting less frequent, and the patient tolerated some cold or iced aliments, milk, creams, etc., but the state was not less grave.

The persons who surrounded the Prince thought that it would be useful to have the opinion of a French physician. They demanded Prof. Potaire, who cared for the regretted Prof. Parrot, and would not abandon him for some days, but proposed M. Vulpian, who was accepted.

The 15th of July, M. Vulpian arrived at Frohs-

dorf, and saw the patient immediately. He confirmed with MM. Drasche and Mayr the existence of a tumor seated in the epigastric region, at the right of the median line, not well limited, and having at least the extent corresponding to the greater portion of the palm of the hand. There was a slight œdema, without pain, at the lower portion of the inferior part of the legs, and the tongue was the seat of a commencement of an epithelial proliferation (Muguet).

The 17th the physicians held a new consultation, and felt the tumor very distinctly in the epigastric region.

After this examination, M. Vulpian speaking first by invitation of his confrères, declared that the existence of a cancer of the stomach appeared to him extremely probable, and that if it was so the neoplastic tissue must be developed upon the mucous membrane of the convex part of the stomach, under the form of a plaque, at a certain distance from the pyloric orifice.

He was inclined to admit this diagnosis, upon the presence of a painful tumor in the epigastric region, upon the intolerance of the stomach, upon the nausea and vomiting during fasting, upon the loss of appetite and the special repugnance for food, upon the loss of weight that had preceded the symptoms for some weeks, upon a somewhat cachectic color of the face, and a slight œdema of the inferior members, furthermore, upon the fact that an uncle of the Prince had died of a cancer of the stomach.

M. Vulpian, charged to make known the result to the Count of Blacas, then confirmed the diagnosis of cancer carried by his two confrères, and also added that the cancer was probably seated, but not certainly, in the stomach, also, that the kidneys were somewhat altered, that there was fatty degeneration of the heart, atheromatous lesions of the arteries, and that these conditions rendered the condition more grave and menacing.

The following days the situation amended favorably. New courage was taken at Frohsdorf, although Dr. Mayr created no illusion. In effect, the symptoms returned in the night of the 8th to 9th of August, the feebleness augmented rapidly, the patient had lost sixty pounds since his return from Goritz. M. Vulpian was called again the 20th of August, but when he had arrived the morning of the 24th he learned that the Count had died at 7 o'clock and 20 minutes.

The Countess of Chambord having made known her opposition to an autopsy, it was only during the process of embalming, which was done fifteen hours after death, that the lesions could be seen.

M. Kundrat, professor of pathological anatomy at the University of Vienna, opened the abdominal cavity by a crucial incision that he prolonged to the superior part to retire the thoracic viscera. One could see by raising the epiploon, that the tumor was constituted by the mesentery, very wide, very much charged with fat in this region, and occupying an extent as large as the palm of the hand. The tumor was composed of a large number of hypertrophied ganglions without any cancerous or sarcomatous degeneration. The stomach offered nothing apprecia-

ble on the exterior. The lungs were sound. The heart had nothing more particular than a volume a little superior to the normal, and a great flaccidity of the pericardium which presented a dead leaf color very pronounced. The aorta was strewn in its internal surface with little fatty spots, and small atheromatous plaques. The œsophagus and stomach were incised successively. The superior part of the œsophagus was entirely sound, but from the union of the superior four-fifths with the inferior fifth, to the cardia, there was seen many ulcerations of a grayish-black color, of a form generally round, near the cardia two large ulcerations occupied nearly all the circumference of the œsophagean conduit.

At the base of the ulcerations the mucous membrane was entirely destroyed, the muscular tunic appeared at these points. The borders of these ulcerations were not jutting, but rather as if they had been cut. The stomach presented the aspect of gastric catarrh. Here and there could be seen, by plaques, injection of small vessels. At the base there was a small tuberosity, some small ulcerations some centimeters from the pylorus, of which one presented the characters analogous to those at the inferior part of the œsophagus. The intestines and liver were normal. The state of the kidneys appeared to indicate a feeble degree of interstitial nephritis.

The viscera were to be replaced, and the physicians were not certain of having found all the lesions that might have existed, and those of which we speak could not be examined with the attention necessary. It was necessary to limit the examination to three or four minutes, for all the assistants. Therefore a histological examination was out of the question. It was upon these data that M. Vulpian wrote a remarkable chapter of diagnostic pathology. He passed in review the causes that would have produced these large and profound ulcerations. One cannot admit that these lesions were produced by a simple catarrhal inflammation, nor a sub-mucous inflammation of the œsophagus. One can invoke a possible atheroma of the arteries, but this supposition has no direct foundation, and like the others is open to objections.

M. Vulpian also rejects the hypothesis of poisoning. The toxic agents that can be invoked, are those which cause ulceration, as arsenic, phosphorus, the soluble salts of mercury, antimony and silver, the caustic acids and ammonia.

M. Vulpian does not admit that the lesions could be stationed exclusively in the inferior part of the œsophagus.

The Count of Chambord never ate alone, and his companions ate of the same dishes, none of them suffered either before or after the beginning of the malady.

M. Vulpian declares that it is incontestable that the disease has not had its departure from the ingestion of a poison. In spite of these denials, in the impossibility of finding a plausible explanation, the hypothesis of a poisoning will be held by many.

Whatever it may be, the history of the disease of the Count of Chambord is most curious, and we are under obligations to Prof. Vulpian, with his great experience and his great clinical sense, for having related it to us.

MEDICAL PROGRESS

POISONING BY NITRO-BENZOLE OR NITRO-BENZINE

—The old oleum Amygdalæ Amaræ, or oil of bitter almonds, which was recognized as being as poisonous as prussic acid, has been replaced in commerce to a certain extent by a cheap and easy method for manufacturing essence of bitter almonds for flavoring purposes—and which is now called nitro-benzole or nitro-benzine, or by the French Essence de Mirbane. It still preserves its poisonous qualities, but its new name is calculated to remove suspicion on the part of the ignorant, consequently as its use increases in flavoring pastries, etc., cases of poisoning are becoming more common. Ziemmsens Handbook gives forty-two cases collected by Boehm, fourteen of which resulted in death. Drs Van der Mursch and De Visscher report, in the *Annales de la Soc. de Gand* for August, the details of an autopsy made upon a child two years of age, which died in five hours after taking half of the contents of a bottle containing ten grammes of nitro-benzine, procured by its mother for making pommade. The symptoms were first, somnolence, followed by agitation, delirium and convulsions—no disturbance of the digestive organs. The autopsy showed marked rigor mortis three days after death, a decided hyperæmia of the lungs, no alteration of the alimentary canal, the contents of the stomach were of a milky whiteness with the odor of bitter almonds. The arachnoid membrane covering the brain was extremely congested, and the white substance of the cerebrum and cerebellum was markedly "sanded" (sable). There was a slight amount of serum in the lateral ventricles.

A coffee spoonful, according to Muller, nine grammes according to Schenk, of the essence of mirbane is sufficient to kill an adult. The absence of odor except from the contents of the stomach, would seem to favor the ideas of Letheby, who considers the nitro-benzine as reduced in the blood to aniline and picric acid, and that the symptoms of poisoning are those of aniline.

ON THE PARTIAL REGENERATION AND REFORMATION OF THE LIVER The *Archives Italiennes de Biologie* contains two articles by Prof Tizzoni and Dr Colucci respectively, which embody some interesting experiments on this subject. Prof Tizzoni, in experimenting upon the spleen of a dog, accidentally wounded the inferior border of one of the lobes of the liver. Six months later he made an autopsy on the animal, and found the greater epiploon adherent to the liver at the seat of injury, which was repaired in greater part by a neoformation having all the macroscopic characters of the organ. The neoformation extended along the epiploon in the shape of a triangular tongue, 20 mm long, 5 mm broad and 2 mm thick at its base, by which it was attached to the liver at a point corresponding to the lesion. This triangular neoformation had in its center a large blood vessel provided by the epiploon and with numerous collateral branches. About this vessel a tissue was found, giving all the characteristics of normal liver tissue. A careful histological study of

the regenerated portion as well as of the neoformation, gave the following results

1st The hepatic cells respond to mechanical stimulus by a very active proliferation

2nd The reaction of these elements is not confined to the point of irritation, but extends to a certain distance beyond, diminishing in activity in proportion to the distance from the center of irritation

3rd This multiplication may produce, under certain circumstances, a regeneration of the liver, where the viscus has been wounded, as well as a neoformation of hepatic cells and biliary conduits beyond the normal limits of the liver

4th The experimental neoformation of the liver was accomplished in the same manner as in its embryonic development

The further results of Prof Tizzoni's researches are not given here, as they relate to histological details, the study of which in the article itself will best repay those working in the same field, except to say that, contrary to the condition which is found in partial regeneration of the spleen, the connective tissue of the epiploon closing the wound of the liver takes no part in the neoformation, other than in the formation of the blood vessels, it represents simply a stroma, in which the neoformation spreads itself

Dr Colucci gives the results of experiments performed on some nineteen subjects—white rats, including two guinea pigs, neither of the latter surviving the operations long enough to be properly utilized. The animals were killed at the end of eight, twenty-nine, thirty, thirty-four, and thirty-nine days, and the article is based on the examination of thirteen wounds made on different parts of the liver by the use of scissors and of the knife, by simple incisions and by excision of cuneiform pieces. These thirteen cases then were followed in two cases by fibrous cicatrices, in one of which a cyst filled with caseous material was found, in one case by incomplete regeneration, and in ten cases by total regeneration. His summary states

When in white rats, one or more of the hepatic lobes are removed, the remaining portion hypertrophies to the extent of the volume of the liver itself

This hypertrophy is due in the beginning to the enormous dilatation of the blood vessels

This dilatation facilitates the emigration of the white corpuscles, which organize into vessel-forming cells, and, by direct adaptation, into hepatic cells

After the lapse of about a month these hepatic cells have reached the ordinary size, the nucleus being nearly a third larger than in the normal liver tissue, the protoplasm remaining finely granular, and not containing much pigment, thus being readily distinguished from the pre-existing hepatic cells

When cuneiform pieces were excised from the liver, union took place by means of a fibrous cicatrix, sometimes uniting the lips of the wound, but more frequently simply investing it, the lips remaining separated

When simple cuts were made with a sharp knife, regeneration of the hepatic tissue followed, earlier and more constant on the convex surface and later on the concave surface

The best conditions for complete regeneration are (1) contact of the lips of the wound, (2) a moderate inflammatory process, and (3) the non-inclusion of the epiploon in the wound

THE ACTION OF IODOFORM IN DIABETES MELLITUS—Prof Bozzolo (*Archives Italiennes de Biologie*), after satisfying himself of the beneficial effects of iodoform in several cases of diabetes mellitus, caused a series of laboratory investigations to be conducted by his laboratory student, M Balp, to determine the influence of iodoform upon the number of red globules, the quantity of hemoglobine, and the arterial tension. These observations were conducted with great care, and by the use of the most approved physiological apparatus. In two cases of diabetes he found that iodoform in large doses—that is, one to two grammes—diminished the elimination of sugar and the quantity of urine, that it diminished the number of red globules and of hemoglobine, and that it diminished the arterial tension. To explain the diminution of red globules, he cites the theory of Binz, that the iodoform, through the iodine which disengages itself, as in iodate of sodium, destroys the red globules, and produces partial coagulations. If this be the fact, the diminution must be progressive, and patients using iodoform would become rapidly anæmic, which anæmia has not been observed so far in cases under this treatment. The diminution of arterial tension would explain the effect of the drug in reducing the quantity of urine, in eliminating glucose, and on the quantity of globules and of hemoglobine, and Prof Bozzolo inclines to the view that the iodoform exerts its influence on the nerve centers, and especially upon the vaso-motor center

A FŒTUS WHICH REMAINED FIFTY-FIVE YEARS IN THE BODY OF ITS MOTHER—M Suppez, in a communication to the Academy of Sciences (*La France Medical*, Sept 4), made some interesting remarks relative to the prolonged retention of fœti. He referred to such remarkable instances as that of Toulouse, 26 years, that of Sens, 28 years, that of Pont-a-Mousson, 30 years, that of Joigny, 31 years, that of Seinzell, 47 years, and finally, that of Quimperlé, 55 years, the specimen of which he presented. He gave two theories to account for this remarkable preservation, the old one of petrification—the fœti so preserved resembling fossils. The immediate principles of their bodies being replaced molecule by molecule by a gypsum, a silicious or calcareous substance, in such a manner as to change their substance without affecting their form or volume. Billemin affirmed that the fœtus of Pont-a-Mousson was petrified. Bartholin, who saw the fœtus of Sens in the cabinet of curiosities of Frederick III, King of Denmark, affirmed that it was as hard as a stone. The second theory was that of progressive dessiccation. Neither the fœtus of Seingel, of Joigny, or of Quimperle, were petrified, and the petrification of those cited remains a contestable statement. The fœtus of Quimperlé was not dessiccated, and so a third theory must be broached to explain not only why a dessiccated fœtus should be preserved for so

long a time, but also why it should be preserved when not dessiccated

The case in question was that of a woman who became pregnant at 28 years of age, and who enjoyed good health up to the age of 84, when she was admitted to the hospital of Quimperle, and died in three weeks' time. The autopsy showed a tumor independent of the uterus and along the course of the right ovarian tube, formed by a cyst whose walls were extremely hard, with an irregular mamillated surface. On opening the envelope which appeared to belong to the mineral world, a child was found which had not undergone any alteration, it presented the ordinary attitude of the limbs flexed upon the trunk, the head bent upon the chest. The two pupillary membranes were perfectly developed, testifying to an age of six to seven months. The cutaneous covering, the superficial organs, the viscera in the great cavities of the body, all the muscles and all the soft parts had preserved their consistency, their pliability and their normal color.

To account for this condition of things, M Sappez, recalled the demonstration of Pasteur where he showed a balloon (toy) containing pure air and the blood of a healthy dog, and another containing fresh urine which had been preserved for forty-eight days in a stove at a constant temperature of 30° C without undergoing any change. Here, nature had thrown an envelope around the fœtus which contained neither air nor germs and the putrescible material was thus enabled to resist putrefaction.

EFFUSION OF BLOOD INTO THE CAVITY OF RETZIUS CONSEQUENT UPON A MUSCULO-ARTERIAL RUPTURE OF THE ABDOMINAL WALLS—Prof Heron Gripet through M Polaillon has presented the report of an interesting case of this rare accident to the Société de Chirurgie de Paris (*Bulletin et Memoires*, Sept 5). The patient while riding on horseback, threw his body back forcibly to protect himself from injury consequent upon the stumbling of his horse which fell upon his fore-knees, recovering himself quickly. A sharp pain in the abdomen and back caused him to dismount, and he had to be carried in a litter to his residence. Medical aid being summoned, he was found to be suffering from an enormous soft tumefaction of the scrotum, black and as large as the head of a child, abdomen enlarged, tympanitic above, dark below, sharp pain above Poupart's ligament corresponding to the left epigastric artery. The bladder was evacuated by the catheter of normal urine, no blood. An enormous discharge of blood had taken place under the skin of the scrotum, in the perinæum, in and beneath the walls of the abdomen. Dullness was limited below by the ligaments of Fallopius, above by a horizontal line a little oblique from left to right, nearer the umbilicus than the pubis. The bladder was completely surrounded by the discharge, compressed and displaced so as to be prevented from performing its functions. The general condition presented no fever, no vomiting, no peritonitis, but syncope on the slightest movement. Under proper treatment of support and pressure, the results of the discharge of blood into the scrotum were relieved

rapidly, but for a long time there remained a resisting surface on the abdomen, most marked on the left side (the flanks were at no time affected) The only accident which occurred during the progress towards recovery was a cystitis resulting from a small prostatic abscess, caused by difficulty in using the catheter from the first, on the fifteenth day the urine passed spontaneously. Obstinate constipation was a marked symptom. In four months' time the patient was enabled to go to the country, walking with a cane, and in a markedly bent position. A year after the accident no trace remained.

One of the interesting appearances which developed as the patient improved was the intense and extensive ecchymotic discoloration, it resembled a pair of bathing drawers, covering the abdomen, the upper part of the thighs, following on the left side the sheath of the femoral vessels to the knee, and was very black about the scrotum and perinæum. It surrounded the anus laterally but not posteriorly.

That this discharge was due to a rupture of one or more arterial branches is argued from the fact of its rapid formation, the acute pain seated along the course of the left epigastric artery, and the descent of the ecchymosis along the sheath of the left femoral vessels, while on the right side the ecchymosis was limited by Scarpa's triangle. The arterial rupture was accompanied by a laceration deeply situated, of muscle fibers on the right side. The discharge extended from the sheath of the muscles posteriorly into the cellular tissue surrounding the bladder, distended the cavity of Retzius, compressed the bladder, spread into the penis, scrotum, perinæum, and surrounded the rectum. That it was under the peritonæum and not in its cavity is shown by its immediate spread to the perinæum, its limitation to the sides and anterior portion of the anus, and the absence of vomiting, fever, etc.

In presenting Prof Gripat's case, M Polaillon remarked that the question might arise, was not the perinæum injured by striking against the pommel of the saddle, and thus account at least for some of the symptoms present, but one could not readily imagine an injury of that extent which would leave the urethra intact. One point was obscure in the paper—the legs were completely motionless for several weeks, which could not be accounted for simply from the symptoms given of the discharge of blood. The patient at the time of the accident felt a sharp pain, not only in the abdomen but also in the back, which M Polaillon considered as due to a laceration of the psoas muscle. When the patient was quiet his back was comfortable, but when his thighs were moved he suffered the same sharp pain as at the time of the accident, which indicated lesions involving the nerves of the lumbar plexus.

ABSENCE OF THE SPLEEN—Dr Isidor Mehrer, in a communication to the *Wiener Medicinische Presse*, Sept 2, reports that in a judicial post mortem made upon a woman 45 years of age, who had committed suicide by hanging, he was unable after a most careful examination of the abdomen and thorax, to find the slightest trace of a spleen, its accustomed place

being occupied by the small intestine. The other organs were normal and properly developed, the liver alone being a little enlarged. The woman was healthy during her lifetime.

A CASE OF ATROPINE POISONING—Dr Sink (Memorabilien Zeitschrift für und p. Aerzte) records a case in a sixty-seven year old woman, who was very decrepit, and suffered from iritis in the left eye. She was treated at the eye clinic by using 5 drops of a 1 per cent solution of atropine upon the conjunctiva every 4 days. The second application produced dizziness, unsteadiness of gait and dryness of the throat. The third application had the same effect, but the symptoms passed off in a few hours. After the fourth application, however, she fell senseless in the street on her way home from the clinic, was picked up by a policeman and taken to the hospital, where the register gave the following record: Patient small, scolophytic, very decrepit, weight 35 kg, constant delirium—makes movement with the hands as if to bring a glass of water to the mouth, or handles her clothes as if sewing. Pulse beat 180–190 to the minute, respiration somewhat accelerated, skin perfectly dry, tongue dry and cracked, voice harsh and unintelligible. The iris of both eyes dilated to the maximum.

There soon followed constant and powerful jactation. She was admitted 11 A. M., it was 4 P. M. before she became quiet enough to allow of the use of the thermometer, which registered 38.4° C, at which time she was constantly calling for water, and complaining of the hoarseness and dryness of the throat. Towards evening she came to herself and discovered where she was. She refused all nourishment, but drank water eagerly. Pulse, 150 to 160. Pupils still fully dilated. The next day, after sleeping restlessly, the pulse had fallen to 130, the temperature was 38.2° C, jactation entirely gone. She complained of great weakness, on the 3rd day she left her bed, temperature normal, pulse 110, skin moist, pupils moderately dilated, but still very sluggish, the voice had recovered its tone. In the course of the day the appetite returned, and she was discharged. She has since fully recovered.

Among the points of interest in this case, is the elevation of temperature, which is so rarely observed in cases of atropine poisoning, that a lowering of temperature is by most authors considered as a constant symptom. The choreic movements are also peculiar. The reporter is careful to state that there were no anæmic symptoms noticed.

WOUNDS OF THE THORACIC DUCT—The attention of Dr E Boegehold (*Archiv für Klinische Chirurgie*) was called to this subject in assisting at the removal of a large carcinoma from the neck of a man, where during the operation the thoracic duct was wounded at its entrance into the left jugular vein. The rarity of this accident led him to look up the literature on the subject to obtain answers to certain questionable points, viz 1st Is it possible to wound the thoracic duct alone, or is it necessarily wounded with other organs through the lesion of which death might follow? 2nd What are the con-

sequences of a wound of the thoracic duct, and, 3rd Are wounds of the thoracic duct curable? It is easy to see that to find these answers he was obliged to reach through a wide range of literature, and accordingly he has brought together in his paper a large number of observations in greater or less detail as suited his purpose, which become very valuable for future reference

The first question, that wounds of the thoracic duct alone can occur without wounds of other parts that are dangerous to life, is answered in the affirmative. It is possible under favorable conditions to wound the duct from behind or from the side. Punctures or short wounds that pass by the side of the vertebræ, can produce this lesion, but he found no other cases cited, except his own, where wounds occurred in the operation of extirpating large tumors. In answering the second question, what are the consequences of wounds of the thoracic duct, he found a number of cases where complete obliteration or compression of the duct were without symptoms. It would seem that collateral branches were very quickly established to lead the passage of the chyle into the blood current. There were two dangers that followed the wounding of the duct where the flow of chyle was not checked, viz compression of the lungs and heart. This leads to the answer of the third question, are wounds of the thoracic duct curable, which he answers by advising an opening into the pleural cavity for the relief of its viscera from compression, and the use of well selected diet to compensate for the loss of the chyle. The closure of the wound itself occurs by compression and retraction of the walls of the vessels during respiration, by the compression which the surrounding tissues exert, or by the outpouring of fibrin. A number of experiments go to prove that the walls of the duct are capable of strong contractions, as has been shown by stimulation through the electric apparatus two hours after death. The lymph or chyle pressure in the duct is not high, being put as equivalent to 9-15 millimeters of mercury (Weiss), or 8-10 millimeters (Luwig and Noll).

NEW INSTRUMENTS.

A NEW DECAPITATING INSTRUMENT

The *Boston Medical and Surgical Journal*, September 27, gives a wood cut with description of a blunt hook, similar in form to the blunt hook used in obstetrical operations for breaking the neck of the child in difficult labor, and by repeated twistings for severing the head from the body. This blunt hook, however, has been modified by Dr Robert B Dixon by the addition of a concealed knife, the blade of which is exposed to the extent of one-fourth of an inch on the inner side of the hook, by simply turning a thumb-screw in the handle. By this means, after breaking the neck of the child by the blunt hook as ordinarily used, the point of the instrument, being protected by the forefinger, the blade is made to complete the operation by severing the head from the body.

THE

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PUBLISHED WEEKLY

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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EXPLANATION.—During the many years of our connection with the editing and publishing of medical periodicals, we have neither found it necessary to make frequent apologies to our readers, or to indulge the habit of attributing every blunder to the "Printer's Devil." But in the management of our present enterprise we have encountered two annoying difficulties. The contract with the printer includes the furnishing of paper, composition, presswork, folding, wrapping, and mailing of the JOURNAL, and he has faithfully endeavored to fulfill his contract. But his first arrangements for wrapping and mailing proved so defective, that it was the principal cause of making each number reach its readers a week after the date of its issue. This evil had been gradually overcome, and we were anticipating the pleasure of commencing the second quarter of the JOURNAL on time, and in reasonably good order, when to our astonishment we found, soon after the issue of the thirteenth number, that it had been actually printed and mailed with many of the errors marked in the second reading of proof uncorrected, and the first column on page 400 just as it was originally set up by the compositor, without so much as having had an inverted letter turned right end up. Yet every line of it had been read by the proof-readers, and the errors marked for correction. A new foreman had been placed in charge of the printing department only a few days previous, and doubtless allowed this particular column to go into his form uncorrected, by mistake. But measures have been taken which, it is thought, will render another such blunder impossible, and also secure a more faithful correction of all errors marked in the several proof-readings.

DEATHS — Professional circles throughout the whole country have been startled by the unexpected death of Surgeon General Crane, of the United States Army. A brief but interesting obituary notice of him will be found in another column, under the head of *Necrology*.

The political press have already named several prominent members of the medical corps of the army as probable successors to the high office so suddenly vacated. Among the most prominent of those named are J. S. Billings and Surgeon Murray.

On the 4th inst. Dr. Wm. H. Byford, Jr., died in Minneapolis, Minn., in the 33d year of his age. He was the son of Prof. W. H. Byford, of this city, so well and favorably known as an author and teacher in the department of gynecology. The deceased was a young man of good natural endowments, and an apt scholar. His brief professional career was much interfered with by ill health, and he finally succumbed to that fell destroyer, pulmonary phthisis.

On the 14th inst. Dr. Brockholst McVickar, one of the oldest physicians of this city, died in Buffalo, N. Y., where he had been spending some time in feeble health. Dr. McVickar had been an active and highly respected practitioner in this city about forty years, and held several public positions of honor and responsibility. He died at the age of 73 years.

THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF VERMONT — It is expected that Mr. John P. Howard will make another liberal bequest to the University, part of which will be devoted to the construction of a new building for the Medical Department.

MEDICAL HONORS — Drs. F. S. C. Grayston and R. F. Blount, two prominent medical practitioners in Indiana, have recently been complimented with the honorary degree of Master of Arts, by the Butler University, at Indianapolis.

M. THUILLIER, a scientist, and member of the French Cholera Commission, sent to Egypt under the direction of M. Pasteur, to investigate the cause or causes of the cholera prevailing there, has died from the disease contracted in the cholera hospital of Ghedid, in Alexandria.

EDITORIAL CHANGE — Dr. Frank Woodbury has become the editor of the *Philadelphia Medical Times*, in place of Dr. H. C. Wood, retired. Dr. Woodbury is well qualified for the position to which he has been promoted.

YELLOW FEVER — This fever is reported to be still prevailing severely in many of the cities of Mexico, particularly at Mazatlan, Manizilla, San Jose, Costa Rica, Nicaragua, Acapulco, Zucutula, Manzanillo, Corrientes, and San Blas. Its tendency to extend northwest is such that precautionary measures have been taken by the Surgeon General of the Marine Hospital Service, to prevent its being carried into Arizona.

A few cases continue to occur in the Navy Yard at Pensacola, and at the Quarantine Station on Ship Island.

AMERICAN CLIMATOLOGICAL ASSOCIATION — A society organization with this name was organized in New York, September 25th, with the following officers: President, A. L. Loomis, of New York; Vice-Presidents, F. H. Knight, of Boston, and W. H. Geddings, of Arkansas; Secretary and Treasurer, J. B. Walker, of Philadelphia. The next annual meeting is to be held in Washington the first week in May.

SOCIETY PROCEEDINGS

OBSTETRICAL SOCIETY OF PHILADELPHIA

Stated meeting October 4th, 1883. The President, R. A. Cleemann, M.D., in the chair. Dr. W. H. Parrish reported a

PORRO-MULLER OPERATION,

and exhibited the uterus, the abdominal incision (which had united) and surrounding wall, the stump of the cervix in position at the lower angle of the wound, the entire external genitals and mons, including the vagina and bladder. The ureters were found entirely free.

Dr. R. P. Harris remarked that this was the only Porro operation that had been complicated by diseased kidneys. The case was an unfavorable one, in consequence of this complication. The albuminous character of the urine was supposed to be due to mechanical interference by the enlarged womb, but, unfortunately, this was not so. The bad habits of the patient had led to a general disease of the arteries, as well as of the kidneys. The former were atheromatous. The Porro-Muller operation has been performed thirty-four times, the unmodified Porro, eighty-two times, total, one hundred and sixteen cases, of which forty-eight per cent have been successful in saving the lives of the mothers. When the pedicle or stump is dropped, it ceases to be a Porro operation. Of thirteen cases in which the stump has been dropped, eleven have been fatal. Dr. Godson is writing a full history of this operation including the many experiments which have been made on animals, to determine the effect of the operation on the reproductive system.

has saved four out of five cases in his own hospitals. In the Milan Hospital nine were saved out of twelve. In Germany the success has been poor, but in Austria better.

Dr O'Hara asked why the Porro operation should be modified, when it had been so successful in the hands of the originator.

Dr Harris. Dr Muller was called upon to operate in a case in which the foetus had been dead for some time and was putrid, the uterus being distended with gas. To prevent any septic matter finding its way into the abdominal cavity, he enlarged the abdominal incision, lifted the uterus out of the abdomen, and used cloths around it and over the wound before incising the uterus. This patient recovered. The mortality this year has been very slight.

Dr E. E. Montgomery had been associated with Dr Parrish in this case as one of the hospital staff, and at first thought the case should be allowed to go on to full term before operating, and that Caesarian section or laparo-elytrotomy, as practiced by Dr T. G. Thomas, should be the selected form of operation, but Caesarean section has been very fatal in large hospitals, doubtless because it is generally a last resort after the patient has been long hours in labor, and for that reason is dangerous. But if a large drainage tube was passed through, entering at the abdominal incision and out of the vagina, and a constant flow of antiseptics kept up, a good condition might be secured.

During the operation a few modifications suggested themselves. One of these was to divide the cervix uteri by a V shaped incision, the peritoneal surfaces being united over the wound, a flat Peaslee drainage tube being introduced and the stump dropped.

Dr Harris tells me that Schroeder has tried this, and that it has been done twice by——, once successfully.

He thought the wire of the ecraseur passed around the cervix before removing the child, a source of danger to the latter, as well as being likely to embrace a loop of intestine.

Dr Harris, in criticising the plan of dropping the stump, called attention to the fact that the portion of uterus embraced in the ligature is not a pedicle, it is a stump, and will continue to contract, and oozing of blood, or even profuse hæmorrhage is liable to occur. It has been found impossible to prevent this by any form of ligature that has been tried. If the stump is dropped this hæmorrhage or oozing will take place into the abdomen, and will be a certain cause of death. Dr Isaac E. Taylor came near success, but his patient died from thrombosis on the twenty-sixth day, during an attack of phlegmasia alba dolens. It would be very desirable to avoid the dragging on the abdominal wound.

Dr Montgomery gave a short resumé of the cases treated by dropped stump, and the causes of death in them.

Dr Parrish remarked that the disease of the kidneys was undoubtedly the cause of death, the implanting of the acute condition caused by pregnancy upon the previous chronic disease. He also spoke of the possible deleterious effect of the ether upon

the system laboring under such a condition of the kidneys. It made the administration of ether in such cases a very serious matter.

Dr Parrish also exhibited specimens from a case of

EXTRA UTERINE PREGNANCY

and made some remarks upon the history of the case. He had attended the patient in her first labor seven years ago. She was a brunette of very restless and active habits and disposition and was quite uncontrollable. She was up and about her house a few days after her labor, and the result was sub-involution which persisted until her death, during the interval she had passed out of his care, and had been subjected to local treatment, including the use of sponge tents. There had developed pelvic inflammation, and later she was troubled with frequent micturition and dysmenorrhœa. She afterwards came under his care again for the treatment of these troubles, and on one occasion he had applied leeches to the cervix and gave her positive orders not to leave her bed, but festivities were going on, and she went down and assisted in making ice cream and cake, and later in eating them, this indiscretion was followed by a second metritis. He afterwards treated for the dysmenorrhœa by numerous minute punctures of the cervix and the application of tincture of iodine, and the introduction of a sponge tent. The next period was not so painful and the second was missed. He told her she was probably pregnant, but two weeks afterward a slight flow occurred, and fearing an abortion he advised rest in bed. She refused an examination and would not be quiet, the flow continued but did not increase, but there was pain in the pelvis in addition. Eleven days after the flow commenced a sudden attack of intense pain occurred, the patient was completely prostrated, and was carried up stairs. As he was not at home, Dr O'Hara was called in and used morphia hypodermatically. He found on examination a mass in the posterior part of the pelvis, the uterus was pushed forward against the pubes. He diagnosed rupture of a fallopian pregnancy cyst and internal hæmorrhage, and gave opiates to relieve the intense pain. The pallor and exhaustion became more pronounced, and death occurred thirty hours after the first symptoms. Other physicians who saw the patient did not agree with Dr Parrish in his diagnosis. The autopsy revealed no recent peritonitis, there was blood in the pelvic and abdominal cavities. This had escaped from a ruptured cyst of the fallopian tube. The foetus exhibited was found in the pelvic cavity. The position of the cyst was such that it would have been an easy operation to open the abdomen and ligate and remove the cyst and ovary and cleanse the pelvic cavity. The fallopian tube involved is dilated except at the uterine extremity. The other tube is occluded at the fimbriated extremity, inflammatory bands derange the relations of the different pelvic organs. We have here the history of inflammatory processes changing the epithelial linings and relations of the fallopian tubes to the uterus and ovaries as predisposing causes of extra uterine pregnancy.

Dr Harris remarked that the hæmorrhage after conception, the peculiar location of the pain, and the pallor make the diagnosis an easy one. He had one patient that recovered spontaneously. The operation suggested by Dr Parrish has been performed once successfully. Dr T G Thomas made the diagnosis and wished to operate, but the husband, a physician, differed in opinion and would not consent, that patient lived sixty hours after the accident. Dr Playfair in his book advises the operation.

Dr O'Hara saw the case early and could not make such a diagnosis. He saw no sign of internal hæmorrhage then. He thought of peritonitis or cellulitis. There had been no history of a cyst of the uterus. He did not see how a positive diagnosis of extra-uterine pregnancy could have been made at that time. The patient was certainly going to die, and he would approve of an exploratory operation.

Dr Parrish remarked that Dr O'Hara was perhaps right. He, (Dr P) was the only physician present who looked at the case in that light. All the others disagreed and had their reasons. If this diagnosis of a probable extra-uterine foetation had been made early, before the accident, then when the acute symptoms supervened a quick diagnosis could have been made as to the cause of the pain. He described a fold of peritonæum found behind the uterus, and as the clot had the appearance of different ages, portions being yellow, he suggested that an extra-peritoneal hæmorrhage had first occurred under this fold, perhaps ten days before the intra-peritoneal hæmorrhage which was the cause of death.

Dr Beates exhibited for Dr Boardman Reed, of Atlantic City, N J, a tumor of the uterus which the latter supposed to be an early stage of carcinoma, but no microscopic examination of the specimen had been made.

Dr Beates reported the case of an infant which appeared well and hearty at birth but died in collapse on the third day. An autopsy revealed acute gangrene of the mucous surface of eight feet of the ileum, hæmorrhage had occurred into the intestine and was the immediate cause of death.

W H H GITHENS, Secretary

CHICAGO MEDICAL SOCIETY

THE Chicago Medical Society resumed its regular meetings on the evening of the 15th inst, after a vacation of two months, and it is hoped the lively interest manifested will be continued. There was a large attendance of members, and the unusual spirit manifested will be productive of many valuable and interesting papers and essays before the close of the current year. The President, Dr D W Graham, gave a short address of welcome in the most appropriate manner, and Dr L H Montgomery recorded the minutes.

The first paper was an extensive one, being "*The History of Insanity in Chicago*," compiled from an analysis of 3,000 cases treated at the County Insane Asylum during the past twenty years, by Dr S V Clevenger, special pathologist of the Cook County

Asylum. The following is a brief synopsis of the paper.

Many things have interposed to baffle his endeavors to present an exact history of the medical progress of this asylum, giving statistical information, etc. For during the time prior to the great Chicago fire, which destroyed all the county records—and the paucity of asylum papers dating earlier than 1871, and also the seven years anterior to 1878—the asylum books were kept in a very careless manner, blotted, smeared, and full of errors. At this time the superintendent assuming charge had transferred to new pages all the case histories obtainable from previous records, and the fuller details obtained from friends of patients. This mass of information has afforded the material for this article, but in analyzing cases earlier than 1878 many sources of error must be eliminated before they can be made available statistically. In *ante bellum* days there was no county asylum. At that time and during the year 1866 insane persons were treated in the wards of the poor-house, also subsequently and during the period from October 1, 1867, to January 10, 1871. Some very comical stories are told of this *regime*, from which the writer deduced that the welfare of a patient was insignificant alongside the chances of stealing a dollar or so, in those times. January 1, 1871, the poor-house had outgrown itself, and the necessity for differentiating insanity from pauperism had become apparent enough to justify the erection of a large brick building, capable of accommodating 300 patients.

A new superintendent was appointed who started out with true medical animus to better the condition of the insane, but the book keeping and records were not satisfactorily kept. January 1, 1875, a change was made in the appointment of superintendent who served until January 1, 1878, at which time the present incumbent's term began, and who has served uninterruptedly to this date.

The writer had incorporated some sixteen different tables in the paper, showing the number of admissions each year (male and female), recoveries, improved, unimproved, sent to the State Hospital, died, unknown, also the duration of residence in asylum of male and female patients, occupations, maximum per cent, minimum per cent and mean per cent of those who recovered, improved, died, etc., being very comprehensive and complete in these details, besides a table showing the psychosis of patients admitted during the fiscal year ending August 31, 1883 (re admissions included), which to elaborate upon without giving the figures complete or in full, might do the author an injustice. Suffice to say that in comparing the figures with some writers in medical journals there is much unnecessary cavil at the term "recovered" as used by asylum statisticians. One reason for this probably is that where 100 can not be obtained in footing up any table requiring it, differently based calculations without all the factors will require additional study and greater chance of error.

The author quoted figures of the Californian asylum at Napa, showing the increase of insanity in that State from 1 to 833 persons in 1860, to 1 to 388 in 1880, and that in this proportion there will be one

insane person to two sane in the year 2000 in that State. However this apparent result occurs in all new countries. Just so it is with the Chicago insane, the proportion of whom to the population is somewhere in the neighborhood of the California figures of 1880 (1 to 383), as there is a great influx of paupers from Europe into Chicago each year. The statistics of the Kankakee and Elgin asylums so far as they relate to Chicago insane, should form an integral part of future estimates in connection with our county asylum in arriving at an idea of the proportion of insane in our city population, with their death and recovery rates. The paper concluded with the exhibition of a number of hypertrophied brains and hearts, one specimen, the heart of a woman weighing 24 ounces and correspondingly much larger, also a brain weighing 57 ounces, the "pons" of which weighed 4 ounces and unusually developed, was that of a Swedish physician, who, when alive, was unusually intelligent.

Dr J G Kiernan reported another case of "Insanity from quinine," in addition to his published cases of two years ago, viz R B, aged thirty-eight, has a sister epileptic, a maternal grandmother and a maternal aunt died from "rush of blood to the head." The patient resembles the maternal side of the house in appearance and disposition. He has never been able to take even a small quantity of beer for fear of affecting his head.

He was recently attacked by fever of a quotidian type, having come from a malarious district. Upon the advice of a fellow workman, he purchased and took 31 of quinine sulphate at a dose. In an hour thereafter he was violent and destructive, smashing furniture purposely. At this stage his friends called Dr K——. There was a wild purposeless violence, but no delusion or hallucination present. He was very incoherent and hilarious. This condition disappeared in two hours, he having meanwhile been given a hypodermic of conine, which controlled his movements. A second dose of the quinine led to exactly the same results, and its ætiological influence was therefore clear. Since disuse of the quinine there has been no further psychical phenomena. A case of transitory fury due to quinine, was reported in the *New York Medical Journal* October, 1882, page 406, which is the only case in literature that we remember that tallies with this case reported to-night. Such cases as these are likely to become of medico-legal importance.

I have heard of three instances in which the use of quinine has been alleged as an excuse for certain escapades, *seemingly the result of intoxication*.

Dr Clevenger asked if there was not some predisposing or exciting cause in the case? Answered, that all the cases had a hereditary or neurotic taint.

Dr R H Engert knew a man in Mississippi to die from the effects of a single (large) dose of quinine, but did not know the quantity taken. The patient became violently delirious and succumbed.

Dr E Andrews offered a resolution which was adopted, directing the chairman to appoint a committee to confer with the Directors or the Public Library on the subject of increasing the medical department of the library.

Adjourned to the first Monday in November

AMERICAN ACADEMY OF MEDICINE.

The Eighth Annual session convened in the building of the New York Academy of Medicine, New York, on Tuesday afternoon, October 9th, at three o'clock, the President, Dr H O Marcy of Boston in the chair. After the transaction of routine business, the applications for fellowship approved by the council were read by the Secretary and balloted for by the Academy. The following gentlemen were admitted into fellowship during the entire session: Drs A C Kemper, Cincinnati, O, John Green, St Louis, Mo, Surgeon-General C H Crane, U S A, Medical Director A L Gihon, U S N, Washington, D C, J Corbin, E F Mordough, Brooklyn, N Y, E B Bronson, L P Walton, R P Lincoln, P A Morrow, Herman Knapp, New York, P J Farnsworth, Clinton, Ia, E V Stoddard, Rochester, N Y, Z B Adams, Farmingham, Mass, F L Dubois, Tromar J Smith, Bridgeton, N J, E L Dunster, Ann Arbor, Mich, J K Weaver, Morris town, Pa, W T Clute, Schenectady, N Y, J A Stewart, Baltimore, Md, A Brown, Hellertown, Pa, F H Gerrish, Portland, Me, J E Emerson, Detroit, Mich, E Hartshorne, Philadelphia, J H Patzski, St Augustine, Fla, and W S Todd, Ridgefield, Ct.

The first paper of the afternoon was that of A D Rockwell, of New York, entitled "The Late Dr Geo M Beard—a Sketch," in which he endeavors to show rather what Dr Beard *was*, than what he did. He showed him as a man of zeal and industry, yet ready at any moment to lay aside his work and listen with untiring patience to the conversation of anyone. One of his most striking characteristics was his humor, and to this was largely due his reputation for eccentricity. Many instances in his life were cited to prove the author's statements.

The next paper was by Dr Benjamin Lee, of Philadelphia, on "The Value of an Acquaintance with Botany as a Preliminary to the Study of Medicine." He deplores the present low grade of requirement for medical students, and the dropping of every topic but the actually medical, and especially the study of botany. He then entered into a historical study of the labors of the early botanists in America, more especially of those connected with the University of Pennsylvania. The earliest work on our American plants was published at the Green Dragon, outside Temple Bar, London, about two centuries ago, which was chiefly valuable in describing a combination of lime juice with the spirit of sugar, and which they call "punch." The value of our native materia medica was pointed out and the deplorable ignorance everywhere existing with regard to it. He urges the return of the study of botany to our medical schools, since were the study not begun by this time it probably would not be entered upon at all.

Dr Traill Green, of Easton, read the next paper, entitled "The Imperfection of Technical Studies as a Means of Mental Culture." The author proved by citation of examples that the sciences are subjects with which physicians have been familiar for a long time, indeed they were among the men who made

them sciences, and hence they are able to speak with authority upon the subject. If the so-called scientific training embraces the only studies by which men could be educated there could have been no truly educated men before the birth of modern science. Sir Isaac Newton's learning was nothing until he discovered the law of gravitation, nor was Harvey a learned man until he discovered the circulation of the blood. Among lawyers, Coke and Sir Matthew Hale, among theologians, Philip Dodridge and Jeremy Taylor, among physicians, Boerhave, Sir Astley Cooper, Sir Henry Holland and Dr Watson, among others, were uneducated. Even in technical schools the teachers are recognizing the need of general training, and they are now asserting that such schools are post-graduate schools, and that those entering should have a preparatory training. The advocates of the assumed modern method of mental development are apt to jump at any little statement which they think is an admission upon their side, on the part of education, as witness the case of President Eliot and more recently that of Charles Francis Adams, Jr, each of whom afterwards denied the interpretation placed upon their remarks, which is confirmed by the reading of their address in its entirety. The old curriculum is adapted to the cultivating of the mental faculties, the *educating* of man, while the cultivation of single capabilities do not make a well rounded man. It has been stated that college professors in time become one-sided, and if that is the case among men who in the start receive a general training how much the more would it be apt to be so in the specifically trained.

Dr Charles McIntire, Jr, of Easton, follows with a paper entitled, "Is it Fair? A study of the Comparative Political Position of the Medical Profession of the United States." This paper assumes that law, theology and medicine were alike learned professions and consequently should be considered as worthy of dignity. But while in theology and in law, the members of each profession were guardians of their own ranks, the privilege was denied to medicine, a condition of things thought not to be fair. Among the reasons adduced for this condition, the author places the nature of our calling and the indifference of the profession as the chief ones.

The last paper of the afternoon was by Medical Director A L Gihon, U S N, on "The Higher Plane in Medicine."

He called attention to the fact that the regularly graduated M D was not necessarily a physician in its true sense. A "doctor" in the people's phraseology includes extremes of possessions and pretensions, and the profession themselves are largely to blame for the elasticity of the classification. To the many a good fee is of more importance than a valuable increment to our knowledge. The taking of students in offices to enter upon the study of medicine before even there is a knowledge of knowing how to study, the nungling of the elementaries and the applied in our medical schools by which a man soon learns to remember recipes and disregard the basement facts of chemistry and *materia medica* of the ingredients of the prescription, produce men for whom the profes-

sion and the profession only are to blame. Many instances were given, taken from the examination papers of physicians applying for entrance into the Naval Medical Service to show the utter unfitness of the examinee to understand the meaning of the words much less to comprehend their proper use. It is not only desirable that there should be a preparatory training but essential. The very language of anatomy, even as now taught, is incomprehensible without such training, and the lack of such preliminary knowledge is an impenetrable barrier, as long as the ignorance remains, to his advancing to the higher plane of professional life. But all thorough preparatory training grades and extended medical courses, severe examinations by disinterested boards are not enough unless the very atmosphere breathed by the student is saturated by preceptor, professor and practitioner with the thought that the service of the medicine is more than a fee-taking prescription-giving routine. If it is impossible ever to arrange that all shall enter upon this higher plane, there should speedily be arranged a means of distinction between the two classes.

The afternoon being far spent, the discussion of these papers was deferred until the morning session.

The evening session was devoted to listening to the President's address, having for its theme "The Recent Advances of Sanitary Science the Relations of Micro Organism to Disease."

He began by referring to the "unexpected honor which one year ago your suffrages conferred upon me in electing me to preside over your counsels."

The academy owes its existence to a wide spread spontaneity of feeling, that an organized effort should be had to elevate the standard of medicine. The success of our efforts should not be judged by our own feelings, but must be left to the criticism of those outside our number. The history of medicine, studied in a broad, philosophic spirit, is of interest and profit, and its evolution with the other sciences marks an era in civilization. Differences of opinion have and will continue to exist, but other things being equal, the better trained and armed soldiery wins. *Rationalis ne medicum* exists alone without rivals, while *isms* and *pathies* will cease to be. The duty of the physician is two-fold, first the prevention, the cure occupies the second place. Sanitation can hardly be called a science as yet, many of our modern appliances were known and used by those of ancient times. Hippocrates saw light in the same age in the history of Greece that gave birth to her famed poets and philosophers, yet he formulated the fundamental principles of "pure air, pure water, and a pure soil."

The discussion of the problems of life are not only instructive but fascinating. Mohammedism at least has the virtue of instilling principles of cleanliness and careful living. The plagues of the middle ages and the devastations following the crusades were but preventable filth diseases.

The vital processes in their sway over matter hold the balancing between waste and repair, and this hypothetical equilibrium is perhaps the best definition of health. The safe removal of waste, worn out

material is one of the chief factors of sanitary science, and its complexity varies directly with the number of individuals gathered together, such as is possible in the present age of steam. As we cannot escape from our atmosphere, a consideration of its impurities naturally first claim our attention. The rates of oxygen and nitrogen is somewhat stable, the effect of carbonic acid has been greatly exaggerated, its ill effects being chiefly seen when oxygen is withdrawn from the air for its production as in combustion or respiration. The influence of oxygen must be carefully considered, since it is a great oxidizing agent for decomposing organic matter.

The foreign ingredients of the atmosphere are very various, and may be carried great distances by aerial currents. African organisms have been found in the air of Berlin. Air, without the presence of moths and dust, will not reveal the passage of a beam of light, as shown first by Tyndal. Amid these moths are to be found many septic organisms, the knowledge of which and their exclusion from wounds has marked an era in surgery, and is helping in the more difficult problem of the germ theory of disease. Impurities exist in water as well as in the air, mineral constituents not only but organic material which may or may not be harmful. As when treating of the air the ever present moisture was an important factor, so in water, soil pollution must ever be taken into consideration. The importance of the study of the sources of septic poisoning can be inferred from the fact that in the late war zymotic diseases killed more than bullet or bayonet. A blind man, no matter how well armed, is a dangerous ally. How can one who is blind to the condition direct as to the prevention of disease? There must be an atmosphere reasonably free from defilement of organic waste, a system of sewerage which shall continue in a steady flow from beginning to end, and a pure and ample water supply.

"Be it our bounden duty as physicians to disseminate to the masses proper instruction in the cardinal virtues of right living, and to demand from our government wise sanitary laws, both State and national, in the enforcement of which every house shall be builded and maintained as sanitarly safe as architecturally, rich and poor alike abundantly supplied with pure air and water, and have their habitation upon an uncontaminated soil."

At the conclusion of the address Dr. Marcy had projected on the screen a number of slides illustrating the character of dust as found in the air, the impurities of water, bacteria, etc.

After the address, which was listened to by quite a number of invited guests, the fellows held their first subscription collation under the rule adopted last year, and had a very pleasant social time.

Session of Wednesday morning. Shortly after 10, the Academy was again called to order. The treasurer's report was read and referred to an auditing committee, the balance on hand amounting to \$238.09. The secretary reported that the council had nominated Dr. J. Marion Sims, of New York to honorary fellowship. The Academy accepted the nomination and elected Dr. Sims.

The Nomination Committee appointed yesterday suggested for officers for the ensuing year.

President—Dr. Benjamin Lee, Philadelphia.

Vice-Presidents—Drs. A. L. Gihon, U. S. N., Nathan Allen, Massachusetts, G. F. Shrady, New York, E. J. Birmingham, New York.

Secretary and Treasurer—Dr. R. J. Dunglison, Pennsylvania.

Assistant Secretary—Dr. Charles McIntire, Jr., Pennsylvania.

Place of next meeting, Baltimore, Md.

The report was received and the suggestions adopted.

The first paper of the morning was that of Dr. L. S. Pilcher, of Brooklyn, entitled, "The Relation of Medical Journalism to Higher Medical Education in America." Before reading the paper Dr. Pilcher reviewed some of the papers of yesterday, criticising adversely their conclusions, and gave a different value to the words "higher medical education" than the usually accepted one. His paper showed that during the past twenty-five years medicine had been in a state of fermentation. With modern facilities of travel and communication, provincialism is impossible. It has been a period of scientific research, in which medicine has kept pace, and to the medical journals has been given the duty of gathering, examining and starting this work. The qualification of a physician will be decided by two things, both from the people, first, legislative enactment, and secondly, (and the more powerful) public opinion. That system of education will prevail that will produce men who will be acceptable to the people. In this higher education medical journals aid.

Dr. Pilcher's paper was discussed by several of the fellows whose conclusions were different from those of the author of the paper upon several points.

The next paper was by Dr. J. Cheston Morris, of Philadelphia, on "The Milk Supply in Large Cities." The great essential of our Aryan civilization is milk, its importance has been shown from the Sanscrit mythological period until to day. It is of use to the child, the invalid, and the person of health. Nothing can be done by art to improve it, its best condition is as it comes from the cow. And a great problem is, how can it be so supplied to large cities. The plan suggested was one that has to some extent been adopted in several of our cities. The cows are carefully kept and well fed, the milk is cooled and strained, shaken to thoroughly mingle cream and milk, put into bottles, corked, and sealed by a strip of paper giving the name of the farm and the date. These are put into boxes, shipped to the city and distributed to the consumer, the milkman gathering up the jars of the day before. The importance of the subject may be seen as at the present rate of supply, Philadelphia expends about \$100,000 a day for milk.

The next paper, by Dr. A. D. Rockwell, of New York, was on "The Exact Value of the Electrolytic Method." The author in an inductive manner from a number of cases showed where we might be able to succeed, and in what we would be apt to fail in the use of electrolysis in surgery.

Dr Dughlison, on behalf of the Committee on Laws of Medical-Practice in the United States and Canada, read the annual report of the committee showing, upon the whole, progress in the efficiency of such laws

A paper on "The Importance of Cleanliness in Surgical Operations," was read, in the absence of the author, Dr R S Sutton, of Pittsburg, by the Assistant Secretary, who states that while it had the same title as a paper submitted by Dr Sutton before the American Gynæcological Society, it was an entirely new paper. While there are germs, bacteria, etc., infesting air and animal organism, they are not all noxious, but because some are, we must fight against all. That cleanliness in every detail would accomplish as much as the antiseptic methods, indeed the success of the antiseptic method was due greatly to the cleanliness.

Dr P D Keyser read, in the absence of Dr L P Bush, of Wilmington, Del., the last paper of the session, entitled "Some Thoughts on Vaccination." Vaccination is a great boon, yet there are many objectors, many of whom do not properly understand the facts of vaccination. For example, it was gravely asserted by a practitioner that vaccination, during an epidemic of small-pox, would increase the liability of the person vaccinated to be attacked by the disease. Then again, many who have the operation performed upon them have but spurious results, and relying upon this, are attacked and lose faith. The subject should be one of education among the people, and public vaccinators should be appointed, with salaries, to see that all are properly vaccinated.

At the conclusion of the paper, Dr Marcy made a short but eloquent valedictory, and appointed Dr Keyser a committee of one to induct the President elect.

Dr Lee in a few fitting words took the chair, and appointed as additional members of council, Drs C C Bombough, of Baltimore, Wm Elmer, Jr, of Trenton, and J Cheston Morris, of Philadelphia.

The Academy then adjourned. The meeting was the largest in its history, and of full and sustained interest from the start.

BOOK REVIEWS

A COMPLETE HAND BOOK OF TREATMENT ARRANGED AS AN ALPHABETICAL INDEX OF DISEASES. By Wm Aitkens, M D, F R S. Birmingham & Co New York.

This book is made up of those portions of the chapters of "Aitkens' Science and Practice of Medicine" which describe the treatment of diseases. It is arranged alphabetically according to the names of the diseases. A brief definition of each morbid affection is given before the treatment is detailed. The work from which this has been compiled is so well known and has been so thoroughly established as an authority, that comment upon its contents is unnecessary. The book may be found useful, as keys, dictionaries, and indexes are, but like them, cannot be considered a treatise upon the subject.

TRANSACTIONS OF THE MEDICAL AND CHIRURGICAL FACULTY OF THE STATE OF MARYLAND. EIGHTY-FIFTH ANNUAL SESSION. April, 1883.

The first fifty pages of this volume contain minutes of the annual and special meetings and the reports of the various officers and committees. The president's address is by Wm M Kemp, and following it is an admirable address upon Medical Bibliography, by John S Billings. The report of the Section of Surgery is by Oscar J Coskery, in which he attempts to "strike the balance" of present opinion upon the subjects of Gastrostomy, Splenectomy, and Nephrectomy. Dr Richard H Thomas made the report of the Section on Practice. This consisted of a carefully prepared and laborious paper, on the Influence of Season and Weather on the Death Rate from Diphtheria in Baltimore. His conclusions will be of interest, and we will, therefore, copy them here.

1 "While the weather alone does not regulate the absolute number of deaths from diphtheria, it has an important bearing upon the rise and fall of the violence of the disease, although temporary fluctuations occur independently of it."

2 "*Temporary changes* in the weather *has but little effect*, but a *continued prevalence* of certain kinds of weather do cause a rise or fall in the mortality from diphtheria."

3 "The conditions favorable to a rise are, low barometer, low winds, especially from the east, high temperature with high humidity, and heavy or continued rainfall."

4 "The condition favorable to a fall are, high winds, especially from the west, low humidity with high temperature, or high humidity with low temperature and (generally) a high barometer."

Dr Wm T Howard, in the report of the Section on Obstetrics and Gynæcology, first considers Trachelorrhaphy, its present status, the indications and contraindications for it, Prophylactic and preventive measures, Primary Trachelorrhaphy. He then describes several cases of Vesico-Vaginal and Utero-Vesico-Vaginal Fistulæ. In the subject of Obstetrics, he calls attention to Axis-Traction forceps and describes Tarnier's forceps.

Under the heading, Report of Section on Materia Medica, is a paper by T Barton Brune on Urinary Chemistry, in which he briefly describes all the more important advances in urinary chemistry made during the year. In the next article Dr John S Lynch describes his own tests of carbolic acid as an antipyretic, and calls attention to *rubus procumbens* in diarrhoea and dysentery. In regard to carbolic acid he says:

"I have used these doses in all kinds of fevers that have come under my notice during the last three years, and while I cannot say that it never fails, I think I can say positively that it fails less frequently than any other antipyretic with which I am acquainted, except, of course, the cold bath."

favorite prescription,	when the pulse is
frequent, is one of	tincture of aco
root and glycerine, in	are four
grains of the first, a	of the sec

a teaspoonful of the last in each dose In typhoid fever he regards it as especially useful as it keeps the temperature nearly normal and seems to prevent diarrhoea and tympanites

Dr J Robert Ward makes the report of Section on Sanitary Science Dr T S Latimer in the report of Section on Anatomy, Physiology and Pathology describes the experiments of Chittenden and Ely on the influence of peptones and certain inorganic salts on the diastatic action of saliva Also, Dr G L Walton's experiments with methyl-lyanethine, the experiments of Ringer on the influence of different constituents of blood on contraction of ventricle, those of Brunton and Cash on the influence of heat on the muscles poisoned by veratria The observations of Eckert on relation of blood-pressure to age are also given, and brief mention made of Dr Whitfield Ward's opinion of the function of the velum and uvula, and the third blood corpuscle of Norris The observations of L C Wooldridge on the relation of the white blood corpuscle to coagulation, and Gamgee's ideas upon the essential nature of secretion, are mentioned

In the Section on Psychology, J W Chambers describes cases illustrating subcutaneous nerve stretching in the treatment of sciatic neuralgia Dr A Friedenwald, Chairman of the Section on Ophthalmology, Otology and Laryngology makes a report for the Section A paper on Laryngeal Stenosis, by H C McSherry follows this An abstract of the next paper, by H Newell Martin, on the Direct Action of Ethyl Alcohol upon the Heart has already appeared in this journal

The next is an interesting paper on the Sewerage of Cities, by C W Chancellor Some Forms of Laryngeal Paralysis are described by J D Arnold, a case of Dextrocardia by S C Chew The prone position during operations upon the jaw is discussed by L M Tiffany, hypnotism, by G H Boyland, St George W Teackle relates some facts in regard to a case of spontaneous cow-pox that occurred in Baltimore county, and experiments with the crusts from it

The paper following contains Dr J N Mackenzie's remarks on Naso Aural Catarrh and its Rational Treatment Malarial Fever in Puerperal Women is the title of the last article, which is by P C Williams

NECROLOGY

CRANE, CHARLES HENRY, M D, Surgeon General of the United States Army Was born in Rhode Island in 1825, died suddenly at his residence, in Washington City, October 10, 1883 He received his education at Yale College, where he graduated in letters in 1844 He then commenced the study of medicine, and graduated M D in the medical department of Harvard in 1847 Dr Crane was commissioned Assistant Surgeon in the United States Army, February 14, 1848, served with the Second United States Artillery in the Mexican war, was in the

Florida war against the Seminole Indians to 1852, with a battalion of the Second United States Infantry in an expedition against hostile Indians in the summer of 1852, with First United States Dragoons in an expedition against hostile Indians in the summer of 1852, with First United States Dragoons in expedition against hostile Indians, and in protecting emigrant trail in Oregon, distinguished in an expedition against the Indians near Rogue river, Oregon, 1856, on the Pacific coast to December, 1856, attending surgeon examining recruits and assistant to the Medical Purveyor, New York city, to September, 1859, accompanied Gen Scott to the Pacific coast, September, 1859, was promoted to Surgeon, United States Army, in May, 1861, was Medical Director, Department of the South, to July, 1863, Medical Inspector of Prisoners of War, August to September, 1863, executive officer in office of the Surgeon General, Washington D C, Colonel and Assistant Surgeon General United States Army, July, 1866, brevet Lieutenant Colonel and Brigadier General United States Army for faithful and meritorious service during the war, and was made Surgeon General, July 3, 1882

Gen Crane had been sick for about three weeks, but was able to go to his office at intervals up to about a week ago, since which time he has been confined to his house He was an officer of great executive ability, affable and courteous to all having business with his office, and universally beloved by the clerks of his bureau

Surgeon General Crane was a man of fine figure, and until his late sickness was in robust health His duties have been in Washington since the war, where he has a host of friends in social and military circles

He was an honorary member of the "Medical Society of the District of Columbia," which, at its meeting on the evening of the 10th inst, passed the following resolutions

"WHEREAS, The Medical Society of the District of Columbia have heard with profound regret of the death of Dr Charles H Crane, late Surgeon General of the United States Army, and an honorary member of this Society,

"Resolved, That in the death of Gen Crane this Society, and the profession at large, have lost one of its ablest and most distinguished members

"Resolved, That in the discharge of his official duties, his marked ability and devotion to everything connected with the advance of medical science, merit the highest commendation of his professional brethren

"Resolved, That this Society tender to his family their heartfelt sympathy in their sudden bereavement"

Dr Crane was one of the physicians at the death bed of President Lincoln, and his portrait is prominent in the well known picture of that sad scene The Doctor leaves a widow and one child, a son Funeral services were held at his residence, at 5 o'clock on the 11th inst His remains will be sent to Rhode Island, and interred at Shelter Island

J M T

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SATURDAY, OCTOBER 27, 1883

No 16

ORIGINAL ARTICLES

STRICTURES OF THE ŒSOPHAGUS—THEIR NATURE AND TREATMENT, WITH CASES

BY HENRY F CAMPBELL, M D, AUGUSTA, GA

[Read before American Surgical Association, Cincinnati, O, June, 1883]

The frequency of injury to the œsophagus, resulting in obstruction and disability of the tube for the entrance of food into the stomach, gives to this class of accidents, and the conditions arising from them an importance well worthy the careful consideration of the surgeon. Few who have had the unhappiness to witness the gradual, or more or less rapid closure of this important canal, to note day by day the hunger, the thirst, the restlessness, the wild desire, the appealing calls for help and relief, and then the wan cheek, the anxious eye, the rapidly emaciating frame, all harbingers of a sure and agonizing death, can ever forget the scenes, of which they have been the unwilling witness, nor the cries of the victim—most frequently a child—as the painful echoes of a memory they would gladly efface.

In the discussion before this Association of a condition of such widely recognized importance and acknowledged difficulty, I might well be expected to enter into an extended consideration of the observations and experiences of others in both early and more recent times, carefully weighing and comparing their methods and devices for relief, as well as their views as to the nature of the affection, with my own, especially the opinion I hold in regard to the peculiarities presented by œsophageal stricture. This, in a paper like the present, I can only do to a limited extent, on account of the brief time allowed for the reading of communications before the Association. My object is mainly to present my own experience in a number of cases, which, though limited, has perhaps been more extended than that which falls to the lot of most surgeons in their private practice.

Besides two cases in which I was consulted casually, and others treated by my advice without a personal examination and after observation, I can at the present time report four cases treated by myself, and under my direction by others after the obstruction had been partially overcome. Of these four cases I am enabled to give the connected history from notes taken at the time, and to give the final result in each, as from the report of those who have had them under observation, and to whose care the continuance of

treatment had been confided. It is on account of what appears to me measurably the satisfactory results of the treatment—dilatation, compared to that more recently suggested of incision, and also to urge the importance of all expedients for the nutrition of the patient during treatment, however protracted and slowly progressed in, that I am induced to relate these cases and make the present brief remarks.

The œsophagus proper is, as is well known, a musculo-membranous canal extending from the termination of the pharyngeal cavity, about opposite the cricoid cartilage, to the cardiac entrance of the stomach, as generally considered opposite the ninth and tenth dorsal vertebræ. In descending, it slightly deviates in the neck to the left side, making it more accessible here to operation, and, it is thought by Cruvelhier, offering some obstruction, on account of the deviation, to the passage of instruments. The stricture is largely, indeed we may say principally, muscular, the fiber being of the striped or voluntary kind, though the functional activity of the canal is only partly voluntary, being largely reflex. This automatic activity is characterized, even in perfectly natural conditions, by a spasmodic quickness and celerity of contraction in the fibers not known in but very few instances to attach to involuntary movements. The existence of the striped fiber and also the quickness of the reflex activity is known to pertain more particularly to the upper portions of the tube,* where it merges into the pharyngeal cavity with its special muscular apparatus, and even more exaggerated reflex responsiveness to excitants. The disposition of the muscular structure of the œsophagus into layers of longitudinal and circular fibers while it admirably adapts the canal for its function of deglutition, and accelerating the progress of aliments downward to the stomach, also involves the liability to spasm and stricture under suitable conditions of the mucous membrane, which aptitude and liability constitute, as will hereafter be shown, the most important hindrance to the treatment of organic stricture of the œsophagus, as well as to the ingestion of food. This muscular apparatus and this sensitive lining membrane derive, as is well known, their sen-

* See paper by the present writer. On the law governing the distribution of the striped and unstriped muscular fiber. —Southern Med and Sur Journal vol vii page 139 March 1851 also Transactions of American Med Association vol iv 1851 page 468. Whenever celerity or quickness of action is required in a muscle under any circumstances, we find the striped or more perfect fiber entering into its composition without any regard whatever to voluntary or involuntary motion. This law the writer maintains is of universal application and explains the three exceptions—the existence of striped fibers in the heart and in portions of the œsophagus and pharynx. These were the exceptions that embarrassed the former law of striped fiber to voluntary and unstriped fiber to involuntary muscles.

STRICTURES OF THE ŒSOPHAGUS

[OCTOBER,

sitiveness and excitability from an abundant innervation of the pneumogastric nerve—both inner- and outer—descending upon the side of the œsophagus and furnishing innumerable sensori-motor filaments to its muscular and mucous coats throughout its entire length. The normal action, then of the œsophagus, being one of alternating constriction and relaxation, it will be easily seen that under abnormal or traumatic irritation, as by the presence of an abrasion or ulcer, or by the existence of an organic stricture, however partial, it would be constantly liable to the occurrence of spasmodic closures in addition, which of themselves might be, for the time being, shorter or longer, of the most obstructive character. I mention this fact in connection with the instrumentalities concerned in their production, because this character of spasmodic closure, superadded to the organic stricture, was a pretty constant feature in all of my own cases, and doubtless is the cause of much of the obscurity attaching to the cases of others—and interrupting, apparently, the progress of treatment—when not fully recognized and met by some special method of dilatation to avoid the production of, and to overcome, the spasms.

It has been the habit, or rather the method of reasoning, adopted by most of those who have written upon the subject, in the discussion both of its nature and the treatment to be applied, to have before them as a model and guide, strictures of the urethra. This I can but regard as a most fallacious comparison, in which only an imperfect analogy and no real parallel exists upon which to base any safe conclusion as to either pathology or treatment. This misleading mode of reasoning, it is thought, may have induced some surgeons recently to adopt the division of the stricture as preferable to the slower, equally effectual, and far safer procedure of gradual and persistent dilatation.

While I cannot profess myself as giving full acceptance to the doctrine so popular with many of late, that incision, whether external or internal, is imperatively necessary for the relief of urethral organic stricture, I regard these operations as comparatively safe, and often commendable, to shorten and facilitate treatment in many obstinate cases. But such procedures are far different in strictures of the œsophagus—first, on account of the hidden character of the obstruction, inaccessible to direct observation, rendering such cutting operations uncertain and hazardous, and secondly, because the relations of this canal to the mediastinum, the aorta, and to the anastomosing arterial vessels throughout its entire length, would render an incision of even moderate depth extremely dangerous, and perhaps fatal by a penetration of the wall of the tube, and lastly, because in my own experience I have as yet found no single case which was not amenable to treatment and improvement, by early gradual and persistent dilatation, with instruments carefully adapted to the peculiarities of each case. Most of the cases are brought to the attention of the surgeon, it is true, only in an advanced stage of the obstruction, and not until the œsophageal disability and defective nutrition have caused an amount of emaciation and exhaustion

which threaten death by starvation. But still, these patients can at times pass fluids through the stricture into the stomach. This is the ground of hope for almost every case. If any fluid, however tenuous and however small in quantity, can pass, it may be regarded as a matter of certainty that some form of instrument of carefully selected material can, by patient, careful, and persistent effort, be made to traverse the still remaining area or what may be regarded the gradually closing canal, and thus secure relief by dilatation is to be accomplished, viz., the possible perviousness of the stricture. Any case outside of malignancy in which this can be done is susceptible of relief, if not of permanent cure, by dilatation.

The causes of œsophageal stricture are known to be various. Malignant tumors and malignant degeneration of the walls of the canal, though in their results the most surely fatal of all obstructions, are not, I think, properly classed among true strictures of the œsophagus, as the term stricture would be applied to other canals of the human body.

As my own experience has been almost entirely restricted to cases arising from a single cause, and that cause of a nature capable of producing œsophageal stricture in its most typical form, we have no need to be concerned about the subject of classification in the present paper.

The rapidly increasing manufacture and almost universal purchase and use in the domestic life of certain classes of the salts of potash and soda—"concentrated lye"—in washing, scouring and other processes of cleansing render these active caustic preparations more frequently than all other causes combined, the terrible agents by which for some years past, and we greatly fear with increasing frequency for some years to come this fearful and often fatal condition of the gullet is produced. Concentrated lye and concentrated potash are so constantly reported by rumor and in the daily journals as well as by medical men, as the cause of death to children by the accidental or unwilling swallowing of these solutions, that the reflective and humane would gladly advocate some legislative enactment which would place them among the poisons too dangerous to be entrusted to the hands of the people, or to be used in their present forms as a common article of domestic life.

The four following cases will serve to illustrate the frequency of these accidents as produced by this class of agents as they also comprehend the principles and method of our treatment.

CASE I.—Polly, a colored woman, aged about 38 years, a servant of Mr. P. Flenning, of Augusta, was in the winter of 1856, the subject of gastric neuralgia, for which I had prescribed a sedative mixture in which chloric ether and bicarb. soda entered as ingredients, being suddenly seized with one of these gastric attacks she called a younger servant to pour out a wineglassful of the medicine from a bottle. On drinking the contents of the glass she was seized with the most distressing burning in the fauces and gullet and epigastrium, which caused her to vomit

with great distress the contents of the stomach and with it probably most of the caustic potash which she had thus taken by mistake.

I was called immediately to the patient, being only a short distance from the house. I caused her to take at once nearly half a tumblerful of olive oil taken from the table cruet. This was to saponify the alkali, and arrest the process of chemical injury to the mucous membrane of fauces and stomach. This was vomited in a short time only slightly changed in character and appearance. The dose was repeated and about a half glassful of the sweet oil was retained. Nausea and vomiting with burning pain in throat and epigastrium continued for many hours, but was relieved by morphine. Blood and bloody mucus soon began to appear in the matter vomited and expectorated. This patient began at once or within a few days to complain of great difficulty and "spasm in the throat" in all attempts at deglutition, even water was swallowed with great difficulty and pain, though, as she expressed it, it gave her delightful relief from the craving and burning thirst which all the time tormented her.

Deglutition, which was from the first painful and obstructed, in less than two weeks began to be for hours together, impracticable, and then rather suddenly and unexpectedly, she would find some of the fluid to pass into the stomach, but always slowly. The swallowing of solids and semi-fluids had been impossible from the time of the accident. Finding this woman rapidly becoming weak and emaciated and not then having the implicit reliance upon rectal alimentation which I now entertain, I determined to begin the process of gradual dilatation at once as an imperative necessity. There were evidently abrasions and unhealed excoriations somewhere in the canal, as was shown by the sanguinolent discharges coming up with the fluids returned on her attempts at drinking. Starvation was staring her in the face, and the face returned the stare with a fixed and abiding expression of hunger, anxiety and distress, which looked more like the glare of insanity than that of any bodily distress. On attempting to explore the gullet with an ordinary œsophageal bougie of moderate sizes I found the instrument produced much pain and was obstructed in the passage a little below the cricoid cartilage. There being much spasmodic action, a No. 10, and then a No. 5, gum elastic urethral bougie was tried, when the latter passed with some difficulty. This was allowed to remain for a short time, when the No. 10 passed without much more difficulty.

I now passed a conical flexible gum elastic French catheter, No. 10, beyond the stricture for the purpose of introducing water into the stomach. A glass of water and a glass of milk were thus injected to the great relief of the sufferer.

As the case progressed towards recovery, it was found that the improvement was often irregular, that is, the size of the bougie could not always be increased from one dilatation to another, but at the beginning of each sitting, a smaller size than the instrument last used, had to be applied before any advance could be made by the introduction of a larger dilator. This apparently discouraging circumstance in

the treatment must certainly have been due to spasmodic action of the circular fibers, and not to any real narrowing of the space that had been gained, for it was observed mostly during the earlier periods of the treatment while yet the cicatrices were tender and irritable, and while perhaps there may yet have remained some unhealed abrasions or ulcerations at the point of injury. This spasmodic irritability continued many weeks, entirely preventing deglutition, even of fluids, and during which time the daily injection of one quart of milk through a catheter into her stomach was her only sustenance. This spasmodic closure of the gullet would occasionally take place some months after she had been able to swallow both fluids and solids, and when the ordinary bulbous tube of the stomach pump could be passed with only spasmodic obstruction for the introduction of water or milk.

After having ceased treatment in this case, she having long since recovered completely the power of swallowing solids, she was taken to the upper part of the State by her employers. While there she was suddenly seized with complete disability to swallow either fluids or solids. The neighboring physician was called in, and all his efforts being unavailing, he proposed that a *mesmerist* who was in the village should see her, saying she must die unless he could relieve her. On arriving and being informed of the nature of the case, he said he would try to relieve her, and called for a glass of water and a piece of corn bread, after which he "thoroughly mesmerized her," and handing her the water, he commanded her to drink it, which she did without apparent difficulty. He then desired her to eat the bread, she hesitated, then rather demurred, and finally ate the whole of it. After having lost sight of this patient for many years, I was sent for in haste, the message being that "Polly's old disease had returned upon her." Being unable to visit her at the moment, I sent her one of the ordinary œsophageal bougies she had formerly used, but the choking had ceased, and she did not find it necessary to resume the self-treatment which had been pursued for a long time after leaving my immediate care.

These suddenly occurring and persistent obstructions to deglutition, relieved in the one case at the behest of a *mesmerist*, and in the other ceasing spontaneously, cannot fail to be recognized as being of a reflex or spasmodic character, affecting the circular fibers, no organic constriction could either occur or be removed so suddenly by any such influences.

CASE 2.—Child of J. J. Anderson, Williston, S. C., aged about eighteen months, stricture of the œsophagus caused by drinking "concentrated lye" some months previously. At the time of first examination, August 16, 1881, the child was greatly emaciated, fretful and crying for water and food. On making attempts at deglutition, some of the food, cake and bread, seemed to enter the upper portion of the gullet, but would be returned in a short time with the water or milk taken, neither solids or fluids appearing to pass the stricture. The mother reported that the child had been unable to swallow any water or food for four or five days—which period of

disability she said was not uncommon as he had had several times before prolonged spells of "stoppage" at the end of which he would be able to get down water and milk, with difficulty, for several days at a time. She reported one of these spasmodic closures as lasting nearly nine days, during which the child had suffered great distress and nearly died of hunger. The extreme emaciation and exhaustion of the child, its present and constant distress from prolonged starvation rendered it important to proceed at once in our attempts at nutrition.

The child being held firmly and its mouth kept open, assisted by Dr J S Coleman, a Fellow of this Society, a number six (6) bougie was passed, for the purpose of exploration, down to the stricture, which appeared to be a short distance below the cricoid cartilage. The instrument was arrested at this point, and after some cautious and delicate attempts to push it further, it was removed. It was covered with thick mucus, mixed with milk and softened bread crumbs, which the child had been attempting to swallow. A number eight gum elastic bougie, with a soft, flexible, and conical point, was now introduced, for the purpose of passing or entering the stricture if possible. The instrument being well lubricated with vasoline, was passed over the finger of the left hand holding down the tongue. No force was or could be used with this soft and very flexible instrument. When it became arrested at the point of the stricture, as the other one had been, it was slightly withdrawn and again gently propelled. This manoeuvre being repeated several times, the point soon entered and passed the contraction, when it was with some obstructive compression pushed on into the stomach. On the removal of the bougie, the mother asked if she might give the baby some water, because, she said, "I see by his countenance he can swallow." She further stated that now being relieved, he would be able to take water and milk for some days, "until he had another stoppage." First water and then milk was given to the child, several wine-glasses of which latter it was allowed to take. It swallowed slowly, but without much apparent spasm. The mother stated it would gradually be able to drink more freely.

As the great and most pressing object was the present nutrition of the child, the mother was directed to supply it cautiously with milk and beef tea or meat juice. We also directed that these articles should be supplemented by nutritious injections, if a sufficient quantity of fluid nutriment could not be taken naturally. No time was appointed for a second dilatation, but the parents were directed to bring the child whenever there was a recurrence of the spasm and disability. The child's vitality was so low, that I was not willing to interfere with its gullet as long as it could take nourishment of any kind for the improvement of its health. In about a week the patient was again presented, the same proceeding of dilatation with flexible conical gum elastic bougie, when the child was again relieved.

We found in the several repetitions made, that the instruments, though increased in size, passed more readily each time, and that the intervals between the

spasmodic closures were longer, while the child increased in flesh and plumpness.

The season being unfavorable for a delicate child to remain in the city, he was sent home to the care of Dr John Smith of Blackville, S C, who had referred the case to me. The following extract from Mr Anderson's letter, dated November 19, 1881, four months after beginning of treatment, will show the favorable progress up to that time, both as to improvement in deglutition and general health.

"The baby is no better in regard to eating any solid food, but he can drink milk. He does not have those long spells of closure of the gullet, as when he was with you, and when he does have it, it lasts not more than an hour or two, or not more than half a day the longest. Dr Smith has tended him ever since he left you, and has used the bougie a great many times. Sometimes when his throat is closed it gives relief, when at others it seems to do no good. He has increased surprisingly in flesh and strength, and can talk as plain as any child. He has not forgotten you, as small as he is. We can't keep him in church, or in any crowd of people. As soon as he gets there he begins to cry and say, 'The Doctor bother me'."

(Signed)

"J J ANDERSON"

The above encouraging and measurably satisfactory account of the case reasonably gave hope of progressive improvement and of a possible ultimate recovery. In preparing our notes, however, for the present report, the information obtained nearly eighteen months after from Dr W W Smith shows that the case afterwards resumed its former unfavorable characteristics.

WILLISTON, S C, May 10, 1883

DR H F CAMPBELL—*My dear Doctor* I received your letter the other day inquiring as to the treatment of James Anderson's child. I have been waiting to see Dr John M Smith to get a history of the case, but as I have not had an opportunity to see him, and not believing that he could give you anything interesting or profitable, I will just give you what I know of the case. From the time of drinking the concentrated lye, it lost the power of deglutition to a great extent from which it never recovered. He used various remedies without any good effect. He was never able to effect anything by dilatation. It lived for some time on sugar alone, just as it would dissolve in the mouth, and finally died of inanition. Yours truly, W H SMITH

By a comparison of the above two communications, it is evident that the child had been for a time successfully treated by Dr John Smith with dilatation, as the father reports his frequent and diligent application of the bougies, and the most decided improvement of the child in the deglutition and in its nutrition, and also the greatly diminished frequency and persistence of the attacks of spasmodic disability of the gullet. In cases of this most deplorable class there are many things which interfere with the progressive and ultimately successful treatment by dilatation. The alarm of the little patient at the bare idea of the instrument ("Doctor bother me," expresses it fully). The disinclination of the parents to dis-

tress the child, so long as it can swallow any food whatever, the engrossing and crowding-out employments of the physician, often a village practitioner with a clientel extending over several counties of the State, all combined to render it probable that progressive dilatation and an overcoming of the spasmodic tendency will not be accomplished even after having been fairly inaugurated, but that on the other hand from time to time the systematic course will be interrupted. The amount of food ingested is so gradually diminished, and the emaciation so imperceptibly advanced, that by the time the parents in alarm compel the attention of the doctor, recontraction to the original degree has taken place, and all that has been gained, though not impossible of recovery, has been, under the circumstances, forever lost, and the child doomed to death by inanition, for want of a longer continued and more systematic treatment.

The note from Dr. Simpson Russ at the end of our next case cordially acknowledges his failure to perfect a cure on account of the hindrances to which we have just referred.

CASE III.—Daisy Crouch, aged about two years, brought by parent early in 1882, with disability to swallow even liquid food except at long intervals and with great difficulty. The child was pale and languid, unable to stand and in a condition of extreme emaciation with an expression of anxiety and pain. Regarding it from its appearance to be a case of enterocolitis or cholera infantum, I enquired as to the frequency of its daily evacuations, when the mother told me that the child scarcely ever had an evacuation, as it never ate anything on account of its throat which had been injured by drinking concentrated lye. The exact date of the accident is not noted. The child was "playing round" at the spring where the grandmother was washing clothes. Unobserved, she suddenly took from the wash-bench a tin can of the concentrated lye and drank some of it. The effect was described as dreadful, the child crying and vomiting and bringing up mucus and blood, while every body thought it would die before morning. It finally got better, but was hardly able to swallow anything, and began "to perish away," when it was taken to Dr. Russ, of Graniteville, who, on account of its condition of impending starvation, brought it to Augusta for consultation. In nearly all these cases an examination is made with much opposition on the part of the little patient, and not without the exercise of a good deal of tact and persuasion seconded by more or less force. The child had attempted to drink water and milk, but from the quantity and instantaneousness of its rejection it was evident that very little or none had passed into the stomach. Though greatly alarmed at the appearance of instruments, this languid little patient made no vigorous resistance to the introduction of the bougies, and a number six flexible conical bougie was, by delicate effort, passed beyond the stricture. This was soon followed by a No. 8, and then a No. 10. No pain seemed to attend their introduction, for after this the child was able to drink, first water and then milk. Being fully convinced of the value

of dilatation in this case, as indicated by our first application, a selection of the proper flexible pointed gum elastic bougies from No. 8 to No. 12 was advised, and the patient returned to Graniteville to the care of Dr. Russ. In case of failure of deglutition, rectal alimentation was advised either as the sole and reliable means of nutrition or as supplementary to the small and precarious amount of food that could be carried past the stricture into the stomach.

Desiring to know the subsequent history and final result of the above case before making our report, I received the following brief and candid note from Dr. Russ.

GRANITEVILLE, May 15, 1883

Dear Sir, Your card of inquiry in regard to little Daisy Crouch was received a few days ago, but I am not able to make any report, because she moved from here some weeks after you saw her, slightly improved. She returned a short time ago to this place, where her father is again employed as *fat as a pig*, and seems to be perfectly well, but she is not able to swallow scarcely any solid food. I rather got tired of working with her at the time, it being so difficult to introduce the instrument on account of her aversion and fear of being hurt. I am satisfied that she could have been entirely relieved if the treatment could have been kept up. I am sorry that I cannot help you out much in the case, and especially as I am, to a certain degree, responsible for the failure.

Yours respectfully, etc.,

SIMPSON RUSS

From the above very imperfect history it will readily be perceived that treatment for only a brief period, together probably with the healing of the denuded surfaces and gradual subsidence of the reflex irritability, resulting in rescuing the little sufferer from impending starvation, and restored to the gullet a competent capacity for deglutition of fluid nutriment, and a slight capability to digest some solid or semi-solid food. Without the judicious use of dilatation at the time of greatest need, it is the belief of the writer that the reflex excitability, and the spasmodic closure of the canal, would have so entirely occluded the channel and shut out nutrition as to insure the death of the child,—even though, as we have seen, the organic narrowing could not have been of itself entirely obstructive. I believe that a resumption and continued use of systematic dilatation would still further improve, or entirely relieve the child of its disability. The following case, though one of greater severity, and attended probably by more serious injury to the structure of the oesophagus, will illustrate the advantage of a systematic, regular, and prolonged treatment by dilatation.

CASE IV.—T. L. Chance, aged 19 months, emaciation extreme and every indication of threatened dissolution from inanition. Stricture of the gullet, located apparently a short distance below the cricoid cartilage, had resulted from the accidental taking of a solution of concentrated lye. The child had for some time been unable to swallow any solid food, and very little water or milk. As here reported this one was by far

contemplate, and offered apparently the least hope of benefit from treatment

A near relation of the family, and one deeply interested in the child, said to me "Doctor, we all felt certain that the child would die, and, as for myself, I often secretly wished that it could die at once, to end its terrible and helpless suffering"

By the cautious introduction of the ordinary blunt-end gum elastic flexible bougie, No 8 in size, we ascertained the situation of the obstruction, but made no attempt to pass the stricture. A No 6 gum-elastic bougie, with a very flexible, soft and attenuated end, was now carried into the gullet, and delicately manipulated up and down, at the point of constriction, till it had evidently entered the narrow opening. It was propelled on toward the stomach without meeting any perceptible hindrance, when it was removed, and a No 8 was passed with little or no more difficulty than the first. For the succeeding three days no very decided advance was accomplished and the child was allowed to return home with its parents, after having furnished them with graduated sizes of the proper instruments by which they were instructed to cautiously continue the dilatation. Rectal nutriment, with meat broths and milk, was advised as a supplementary means of supplying nutriment. Observing in the parents of this child a clear intelligence and full comprehension of what was required, with aptitude and firmness to carry out the treatment, I thought best to advise that the dilatation be performed by them, as equally safe, less alarming to the patient, and securing more perfect regularity of application than could be expected from any medical attendant. With this view the dilatation was repeatedly done in their presence, and every step in the process carefully explained. The case, however, was remanded to the general care and observation of the family physician. Instructions to return to Augusta for further examination and advice when necessary was also given. The history of the foregoing case is perfected in the letter of Mr Chance (father of patient) in reply to questions sent him during the preparation of the present report about six years after the accident

LAWTONVILLE, GA, May 25th, 1883

DR HENRY F CAMPBELL, Augusta, Ga, —Dear Sir—Yours of the 21st at hand. I will endeavor to answer your questions as best I can

- 1st Name of child, Thomas Lanier Chance
- 2d Age at time of accident, sixteen months
- 3d Date of accident, April 1st, 1877
- 4th Time elapsed between injury and beginning of treatment by Dr Campbell, about three months
- 5th The difficulty of swallowing food began about a month after the accident
- 6th The child was emaciated to a very great extent, was nothing but skin and bone
- 7th There was a discharge of blood at times when I used the probang or instrument down the throat, to open the stricture—nothing like the lining of the gullet was discharged, but there was a very thick mucus
- 8th The first time I carried the child to you, I

spent three days in Augusta—the next and last time only one day

9th We dilated the throat for about one year, once or twice every week

10th The child's present condition is very good. Has not been troubled in swallowing for about three years—only that while eating at times it will get choked, but for a short time. On taking a swallow of water or milk it will get all right

11th He is very healthy and fleshy at this time. I consider him all right so far as I know

12th We used injections of milk for about one year. We fed him only on very light crackers after he got so that he could swallow anything

Please give me your opinion as to his future condition—as to what you think of the stricture ever closing again. Hoping you may be able to gain the required information from this, I am very respectfully yours
(Signed), R C CHANCE

I have been thus particular in securing and presenting, sometimes perhaps tediously, all the facts and minute details pertaining to the progress and the ultimate result of the four cases of oesophageal stricture from chemical injury, in order that the beneficial results of treatment by dilatation may be illustrated. By a careful review of these facts, I think it will be readily recognized that just in proportion to the regularity and prolonged application of the dilatation, till the capacity of swallowing solid food is attained will the benefit be progressive and the ultimate result satisfactory. Whenever, by the use of natural deglutition, the solid alimentary bolus can pass the stricture, the improvement is apt to be accelerated, for each such passage of the bolus is attended in a certain degree with the same practically beneficial result of the bougie dilatation, and from that time on the reflex excitability gradually diminishes, until an occasional choking, at longer and longer intervals, is the only trace left of the extreme and impending fatal spasmodic susceptibilities of the injured gullet. Timely and judiciously applied, dilatation, if continued even for a brief period, will often rescue the patient from impending death by starvation, and secure a food-way fully adequate for the purpose of nutrition. In a communication from Dr B F Wyman, of Aiken, we have illustrated the great value of prompt measures, and the good results of systematic dilatation even with instruments but imperfectly adapted to the purpose. We condense the following summary from Dr Wyman's letter

CASE I—Robert Brown, colored child, aged six years, had accidentally swallowed concentrated lye about one month before. His mother said his mouth had become very much swollen immediately after drinking the lye, and that subsequently it became very raw, and that he had been able to eat scarcely anything since, first on account of the soreness as she supposed, but during the last two weeks the mouth had gotten well, and yet he could not eat any solid food, and even fluids were swallowed with difficulty and as soon as he had swallowed (even a little milk) that it would be vomited up again. On this

account she thought his stomach must be still sore. Upon examining the child I found it exceedingly emaciated, in fact almost a skeleton. I requested that some milk be brought and the child allowed to drink it. He seized the cup with avidity, attempted to drink it but would strangle and the milk or some portion of it would regurgitate through the nostrils. After using about half a tea cup of the milk, the greater portion being wasted in the attempt to swallow, the child almost immediately thrust his forefinger into his mouth as if to gag himself (in order to induce emesis) and the milk was vomited up. I at once suspected there was stricture of the œsophagus near the opening into the pharynx, and probably another stricture at its termination at the cardiac orifice—either that or there might be still an ulcer remaining at the latter point. On introducing my forefinger (which was unusually long and thin) into the pharynx I found almost complete absence of the aperture of the œsophagus, caused by cicatricial contraction. I proceeded slowly to overcome the stricture by gently inserting the first phalanx of my finger into the orifice, which after some trouble I succeeded in accomplishing. I then, by using a small probang, succeeded in clearing the passage to the cardiac orifice of the stomach. This procedure was kept up for about a month, the patient being fed on milk and lime water in a tablespoonful dose every two hours during the day for several days, after that some solid food was gradually allowed. This patient made a good recovery and suffered no further inconvenience so long as I kept him in sight.

CASE II.—Martha Knight, colored girl, aged three and a half years, brought to my office for treatment, the parents of the child stating that sometime previously (I forget how long) the child had swallowed some concentrated lye and since she had been unable to swallow any solid food. I found the condition almost the same as in case No. 1—great emaciation and considerable general debility. Upon examination found some stricture of the aperture, though not nearly as much as in case No. 1. I found very little difficulty in overcoming it so as to introduce the end of my finger, and by cutting down a sponge probang as small and pointed as possible, I succeeded in reaching the cardiac orifice. The treatment was the same as No. 1, and the patient made a good recovery. This child had no vomiting, simply regurgitations of food and liquids.

Dr Wyman remarks further: "In connection with this subject I will state that I have seen several fatal cases resulting from the swallowing of concentrated lye. In all these cases death was produced by suffocation—the caustic lye causing swelling of the epiglottis, and upper portion of the trachea, thereby rapidly cutting off the supply of air to the lungs from œdema of the glottis.

THE FREQUENCY OF CHEMICAL INJURY TO ŒSOPHAGUS FATAL CASES, AND OTHERS WITHOUT TREATMENT

From the above, and from cases that have transpired within the knowledge of the writer, it may be justly inferred that the cases of chemical injury of the gullet, especially by concentrated lye which sur-

vive, to result in stricture, and apply for treatment, constitute but a *minority*, while perhaps a majority die from the immediate effects of the caustic, or before any curable treatment has been made available.

CASE VII. Child of Mr Stephen Bush, of Edgefield county, S. C., one mile from Augusta. Concentrated lye was swallowed by the child. Fearful excoriation of the mouth, lips, tongue and fauces was produced. Œdematous swelling soon followed. Dyspnoea supervened, with closure of the air passage, and the child died in twenty-four hours, from œdema of the glottis. The case was observed and reported to the writer by Prof N. C. Eve, of Augusta.

CASE VIII. Austin, aged 18 months, child of Mr T. A. Boyle, of Augusta, while in Nashville drank concentrated lye from a tin can where it had been used by a servant in scouring the floor. The child crawled to the can and drank a little before it could be stopped. Olive oil was given. Great excoriation and inflammation of the mouth and fauces resulted, and œdema of the glottis supervened. Prof Duncan Eve, of Nashville, was called, but treatment was unavailing, and the child died in less than twenty-four hours.

CASE IX. Walter, aged 6 years, son of T. W. Boyle, brother of T. A. Boyle. I was consulted in behalf of this child—a healthy boy of 6 years. He had found a can of concentrated lye in a closet, when 17 months old. He "took some of the lye in his mouth, when it was taken away by his mother." Great inflammation of the mouth and throat followed, but by application of oil the child recovered without stricture. I found in the case at this time some slight abnormality in the muscular apparatus of deglutition and occasional spasmodic movements. These symptoms were doubtless the result of the injury during infancy. As they were thought to be less marked than formerly, no treatment was instituted. This case is mentioned in connection with the preceding one, to show how liable to accident with these dangerous poisons are children, a second case occurring in the same family despite the warning and the alarm produced by the first.

CASE X. Colored child, aged 2 years, drank by mistake "concentrated lye," used by the mother for cleansing pots. Much swelling of the mouth and throat was caused, and the child was in great agony. Mr J. W. Panknin, prominent druggist of Augusta, who reports the case, prescribed olive oil, of which he furnished half a pint, to be taken freely. Subsequent history not known.

CASE XI. Clarence Gordon, colored child, aged 2½ years, residence Augusta, Ga., drank solution concentrated lye. Mouth, tongue and throat severely burned, could not swallow for many days. Then took fluids with difficulty. The child gradually "perished away," and died about a year after the accident, no dilating treatment having been used in the case.

CASE XII. Theodore George Tompkins, colored, aged 13 months, creeping to tin can containing solution of concentrated lye used by the mother in scouring the floor. Mouth, chin, and throat as far as

could be seen, "badly scalded" Child could only swallow water Physician was called Lead lotion was used to mouth Child became extremely emaciated, and died in five weeks No attempt at dilatation

CASE XIII Theodore Henry, brother of last case, aged 4 years After death of the first child, concentrated lye was no longer used in the family "Washing soda" was substituted The child drank some of a strong solution of the soda Much injury to the mouth and throat was caused, and the child pined away, and died two or three months after

CASE XIV Furnished by Dr R H Baker, Augusta A colored child aged 2 years, swallowed concentrated lye Injury to mouth and fauces Stricture, and inability to swallow followed Case brought to Dr Baker in extreme emaciation, and apparently too far gone for treatment, and was soon after reported by the mother as having died, six months after time of injury

CASE XV Furnished by Dr G W Mulligan, of Washington, Ga Lucy Williams, $4\frac{1}{2}$ years old This child had been in the habit of drinking water from a gourd The mother had made a solution of the "White Rock" potash in a gourd, and left it, June 27, 1874, on a bench The child, thinking it was water, drank perhaps an ounce of the very strong solution The mouth, tongue and fauces found of a deep red color, with here and there ashen spots Complains of great pain in gastric region Occasional attempts at vomiting The usual remedies used Difficulty of breathing added, and on 29th the child died, asphyxiated, caused, I suppose, from œdema of the glottis

CASE XVI—Tommy, child of Mr M J O'Conner, swallowed solution of concentrated lye, used by servant in scouring the floor, March 4, 1882, aged two years, lived fifteen months after taking it, dying May 20, 1883 Though suffering dreadfully in the earlier stages, no stricture was discovered until November, when milk sucked from a bottle was constantly regurgitated, and a stricture was discovered For five, seven and even ten days at a time, after its first discovery, the child would be unable to swallow fluids, and nourishment was administered entirely by enemata of milk, when suddenly the power of swallowing would be regained, and for three weeks or more the child would be nourished again in the natural way The mother, Mrs O'Conner, from whom this account was obtained, reports that dilatation was tried by Dr Edward Geddings without success The spasmodic character of the obstruction in this case will be readily recognized from its similarity to Case II (Anderson's child), which has already been commented upon in this paper

C T, a girl five years old, with childish curiosity put to her lips a solution of potash kept in a bottle in the kitchen for cleansing purposes The contact of the caustic with the mouth being painful, it was evidently withdrawn, and she escaped without serious injury

Archie B, son of Dr S C Eve, aged four years, observing, as he supposed, a can of condensed milk, of which the child was very fond, climbed to an

upper shelf in a pantry, and thrust his tongue into the whitish semi-fluid mass it contained His tongue was severely excoriated, but he experienced no further damage from the enterprise

To this last collection of cases might be added two or more others occurring within the same limits of locality, concerning which, however, our knowledge is not accurate, except as relating to the fact that serious, and in one case fatal, injury resulted from the accidental drinking of concentrated lye It may here reasonably be asked, why report a number of inconclusive cases, in which neither the treatment, nor its results can be recorded To the implied rebuke we patiently answer That though indeed the primary, and perhaps most obvious object of the present paper, is to study carefully the nature and treatment of strictures of the œsophagus, resulting from chemical injury, in the light of my own experience and observation, yet as an object scarcely less important, and far more widely beneficial is that of showing the fearful frequency of such accidents, and the fatality resulting from them, as will awaken an interest in the restriction of the sale and careless use of the caustics causing such direful results Early in the present discussion has been foreshadowed our proposition that such humane and wholesome object should be attained through legislative enactments, either in the State or by the general government This is an object appealing far more to the sanitarian than to the surgeon, though it is necessarily through the surgeon and the general practitioner that the deplorable history and frightful carnage—burning of the innocents—by this insatiate Moloch of the household must come

THE SALE OF POISONS

In nearly all the States, and throughout the dominion of enlightened people, if not in every one of them, laws have long since been enacted placing under the most careful and imperative restraint the sale of a considerable class of medicines, recognized as poisons by the druggist, by special provision or by their humane caution, this intelligent class of dealers carefully label as "poisons" While often the addition of the death's-head and cross-bones proclaim to the unlettered and unwary the lethal nature of the drug they are about to handle, but how is it with the sale and distribution of these potent and destructive chemicals, to the ravages of which we have had so often to refer

THE POTASH FIEND, "CONTINENTAL CONCENTRATED LYE," THE POTASH BALL, ET ID OMNE GENUS

For many years past there has been growing up in this country, and possibly in England and other European nations, a trade of the most active, and probably to those engaged in it, of the most profitable kind, in cleansing agents, the intent and functions of which seem to be supplemental and additional to the soap trade

This commerce deals almost exclusively with alkalis, and had extended to the Southern States, as many older citizens will remember, when nearly fifty years ago common carbonate of soda—"lump soda," as it was then called—began to be used by the wash-

erwomen, scourers, and paint washers as a quick and thorough remover of grease and dirt from soiled clothes, floors, and painted walls. This alkali was dissolved in varying proportions—generally a lump “the size of a piece of chalk,” in a bucketful or washtubful of water, was the indefinite formula which guided the intelligence or the stupidity of those who used it.

The amount of labor in washing was lessened, and probably money was saved in the expenditure for soap, but this reckless use of the lye was early discovered to injure the texture of the clothing, and it soon became unpopular with housekeepers, so that no laundress could obtain employment who could be convicted of “using soda in the water.” Many phases of the same labor-saving devices, all claiming a more excellent way and “not to rot the clothes,” engaged attention and sometimes confidence for awhile, was tried, found wanting, and discarded by all intelligent housekeepers and honest washerwomen, on account of the injurious effects of all of them upon the clothing so treated.

It is unnecessary, as it would be inappropriate, here to follow a history of these various devices, for they cover a period of over half a century. At best, it was but a contest, in which laziness and dishonesty on the one hand were opposed on the other by watchful intelligence and enlightened economy. For once and for awhile the right did seem to triumph, but in later days the evil in another form again broke out, and has gained a more general and destructive spread than ever before, and, horrible to tell, with ghastly addition to its triumphs—the destruction of human life, swelling the bills of infant and child mortality, I do not hesitate to say, by hundreds every year in this country alone. At the present day there are manufactured and sold in this country two or three articles of the nature referred to, one of which at least has gained a fearful prominence in the sad catastrophes which have attended its careless use, or, as would appear, its *misuse*. Concentrated lye is an article, the exact process of preparation of which is not known, except, we suppose, to the manufacturers. It is sold in painted tin cans, covered by a white label. On the labels of that which appears to be the most popular brand, is printed, after the manner and intent of a trade-mark, “Continental Concentrated Lye.” Directions are given in French, German and English, for the making of soap by the use of the contents of the can in gallons of water with pounds of fatty materials. The large amount of water and grease it is capable of saponifying, would alone indicate to the scientific its concentrated strength as an alkali, and consequently its destructive energy as a caustic. The report of cases in the present paper, as well as the invariable results of all accidental swallowing of it, fully prove how direful and destructive are its effects, and yet on no part of the label or can, nor on any wrapper enclosing this terrible poison, is there the least intimation that danger or death, or injury of any kind, is to be even suspected! This can, with its white cover, illuminated label and finely printed directions, and closely resembling in form and size a can of condensed milk, or corned meat,

or choice comestible, is sold as freely and unrestrainedly, with no more questions asked and no more cautions given, than in the sale of the most innocent and harmless article of food and luxury.

In ninety cases out of a hundred its professed and legitimate intent of soap-making is never carried out by the purchasers, but in various ways it is most ignorantly, carelessly and dangerously handled. The can is left open, strong solutions are made of portions of its contents for various purposes of cleaning, and it is not surprising that the unwary and the innocent should fall victims to their ignorance of danger in the cup or to their infantile curiosity.

“*The star ball potash*,” unequaled for purity and strength, is another preparation rivaling in commerce and domestic use the concentrated lye. It consists of a mass of potash enclosed in a coating of rosin, like the concentrated lye. Though its professed object is the making of soap, it is much more largely used as a cleanser. After being made into a solution of various strengths, it is perhaps less liable to enter and deceive than the lye, but is handled with equal freedom and carelessness in families, and is not the less capable of destroying life than the one we have shown to have been so fatal in the Southern States.

In the present paper we have depended upon the dozen or more cases collected, most of them within a circle of not over twenty miles in extent, for what is supposed to be adequate illustration of the frequency of the accident arising from the unrestricted sale and careless handling of these caustic preparations. Had the usual and more thorough plan been adopted of sending interrogatives to the members of the profession to elicit individual observations and experience on the subject, it is believed the record would be a most frightful one, in which cases of death or injury, instead of a dozen, could be counted by hundreds throughout the South, and perhaps in all sections of this country, nearly all arising from the same cause. What better could be expected? These caustics are sold in every grocery-store in every city, village, hamlet and cross-road of the country without caution or even hint of their destructive nature. To earnestly call attention to an influence so adverse and dangerous to the public health, and to ask from the sanitary authorities that protection for the people which all good governments are bound to give, has been in so far the principal object of our discussion. While in the foregoing we have not presumed to formulate any act or provision looking to the control of the sale and use of the dangerous caustic alkalies, we would suggest that the attention of the National Board of Health be called to the importance of securing from the general government some legislative precept or command by which manufacturers shall be compelled, in view of the perversion of their intent of the article as to soap making, to have ineffaceably stamped upon the tin can containing the concentrated lye, and written indelibly on their labels the word “*poison*,” and for the unlettered, that everywhere recognized warning against danger—the death-head and cross-bones—the black flag declaration of war against humanity.

Some equally effectual warning should be attached

to any form of package in which such poisons are sold Why should strychnine, arsenic, belladonna, and even laudanum, to be handled only by scientific druggists and physicians, be so marked, when this more frequently fatal agent, handled principally by the comparatively ignorant and uneducated, be cast upon the people with no caution, warning or even hint of danger?

TREATMENT OF ŒSOPHAGEAL STRICTURES AFTER CHEMICAL INJURY

Though in the history of the four cases forming the basis of this paper the methods and devices of treatment by dilatation have been more or less particularly dwelt upon as the only course found necessary in what appeared to be several extreme cases, it is thought best to consider the comparative advantage and the dangers of some of the surgical operations that have been recently practiced These are internal œsophagotomy, œsophagostomy, and gastrostomy Each one of these has been practiced in cases wherein there was a real or supposed impossibility of pursuing dilatation to a successful result In some of the cases in which these cutting operations have been performed, as in obstructions by tumors and cancerous affections of the tube, œsophagostomy or gastrostomy were the only resource, if any attempt at surgical relief was to be made Such cases, however, do not come within the purview of our discussion, as not properly to be classed as strictures Internal œsophagotomy, then, as the only surgical operation claimed to be applicable in the class of strictures we are discussing, is the one which may here be considered Dr Morell Mackenzie¹ and Dr J O Roe, of Rochester, N Y, are the two surgeons who have more recently and prominently practiced internal œsophagotomy in cases of stricture and other obstructions of the gullet, while the record of previous operations by others have been given by them Dr Roe² regards the operation as "one which must take its deserved place among the operations in the œsophagus," and the published statistics of the operation show that it has been performed from the time of Maisonneuve's three operations, 1861-'62 to his own two quite recently, some fifteen times Dr Mackenzie, though reporting one measurably successful operation of his own, yet discusses these, and the results of all internal œsophagotomies by others, in the most candid, impartial, and circumspect manner, and thus we are enabled to compare continued and progressive dilatation as presented in the four cases of the present paper with the result of some fifteen cases in which dilatation was attempted to be supplemented and facilitated by the division of the stricture with the œsophagotome In his own case, that of a man, the incision was made in the mid line behind, dividing the stricture from below upwards "There was no serious pain, but in a few hours the patient began to feel some discomfort over the base of the right lung, and unmistakable signs of pneumonia soon afterwards

showed themselves Having continued to manifest signs of pulmonary disease from the time of the operation, the patient died three months after, and at the post-mortem both lungs were found considerably congested, and presenting patches of pneumonia The right pleural cavity contained a large quantity of sero-purulent fluid Commencing about one inch below the cricoid cartilage, and extending downward for three inches, the walls of the œsophagus were found to be slightly thickened, hard and uneven on the inner surface, the lumen of the gullet being considerably restricted for that extent At the lower part of the stricture an incision about one inch long was found extending through all the coats of the tube below, and through the mucous and part of the muscular tunic, for the upper half of the length, the wound showed but little signs of cicatrization" Dr Mackenzie remarks on this case that "the pulmonary inflammation to which he ultimately succumbed came on so soon after the operation that it is most probable there was a causal relation between the two events"

The occurrence of structural and inflammatory changes in parts and tissues, distant from the seat of both the strictures and the operation has been quite a frequent sequence upon internal œsophagotomy, and in many of the cases under circumstances in which a perforation of the coats of either the gullet or the stomach could not be charged with this result Besides others mentioned both by Dr Mackenzie and Dr Roe, two of Maisonneuve's three cases were found to have died of peritonitis, one of them died the eighth day after the operation There was intense peritonitis, the origin and source of which, says Dr Roe were entirely unknown, though the cause seemed to be in the pelvis In one of the Studsguard's cases a girl eight years of age, who had swallowed lye and was operated on by internal œsophagotomy, the incision being made from above downward through a strong elastic obstruction, two hours after had some pain in the cardia and back, relieved by throwing up some clear blood Her voice got thick and she could only speak with difficulty, and three times in the afternoon there was much oppression in the chest and dyspnoea, so much so that she grew bluish red in the face, and it appeared as if she would suffocate In the last case of Studsguard's we have functional disturbance in the lungs and stomach, which being distant from the seat of the structure and the operation could not have been caused by a perforation of the tunics of the gullet, and of which otherwise we have no evidence Leaving out of our consideration for the present the more obvious (and momentous) dangers of the operation candidly admitted by Mackenzie and Roe, such as perforation of the wall of the gullet, resulting in fatal mediastinal or pleural abscess, exhausting hæmorrhage and œsophagitis I have grouped together the class of sequences as above seen in order that they may be recognized as liabilities and dangers inseparably attaching to any internal œsophagotomy, according to the plainest and most unanswerable physiological reasoning and experiment No one familiar with the experimental researches of John

¹ Dr Mackenzie refers to two successful operations by Dr E C Berg of New York in *Arch of Laryngol* Jan 1883

² See *N Y Med Record* Nov 11 1882

Reed and others upon the functions of the pneumogastric nerve can fail to find in these results the true interpretation and the probable cause of the phenomena referred to as the not infrequent results of section, or injury of the par vagum, pulmonary congestion, parenchymatous infiltration, pseudo-pneumonia, crepitant râles, dyspnoea and a disturbed circulation in the structures supplied by the branches of the several trunks, are all familiar results of experimental section of the trunks of the pneumogastric

As from the beginning of the present paper, the pneumogastric has been recognized as a most important factor in the production of reflex tonic, and enduring spasm (*spasmus tonicus*) of the circular fibers which the writer claims it is impossible to distinguish from organic stricture, and which produces the fatal result by starvation, he believes more frequently than the modular kind. So we now wish to call attention to the fact that it is to the wounding or section of the trunk of the pneumogastric, or of some of its more important branches in internal œsophagotomy that are due the functional and structural changes in the vital parts to which it is distributed, and to call attention to this as one of the most momentous risks to be incurred in the operation as at present devised. We are instructed that the safest line and the only one that ought to be adopted for the incision is along the middle of the posterior wall of the gullet. Leaving out of view for the present the abundant blood supply along this wall, by reason of the anastomotic chain of the aortic œsophageal arteries, rendering incision here most liable to hemorrhage, as it has often been found, and also the tendency to future spasm which repeated wounding of the sensitive mucous lining will produce, let us recognize a danger here before not mentioned, but obviously as much or more to be dreaded even than hemorrhage. The trunk (*œsophageal plexus*) of the right pneumogastric nerve applies itself to the posterior wall of the gullet, at the arch of the aorta, and is conducted through the posterior mediastinum to the cardiac end of the stomach on that aspect of the tube, while the left trunk of the pair pursues a similar course on the anterior surface of the gullet to the pyloric end of the stomach, where they both supply that organ and become tributary to the solar plexus of the organic system of nerves. In their course downwards they each supply abundantly the lungs of their respective sides, while to the œsophagus multitudinous filaments are furnished to the muscular and mucous coats. In Dr Mackenzie's operation the incision having been made according to rule upon the posterior wall of the gullet, closely to which is attached the right trunk of the pneumogastric, it is a significant and apposite sequence that crepitant and moist râles and dyspnoea with serious pulmonary disturbance continuing for three months corroborated by a *post mortem* showing pulmonary infiltration and pneumonic patches, should have followed the operation—all these pertaining almost exclusively to the right lung, or that supplied by the nerve which if cut experimentally would have resulted in these same functional and histological changes. As to the peritonitis and other disturbances of the abdominal

viscera, though in the opinion of the writer they can be legitimately attributed to the same cause, he will, after suggesting the explanation, leave it to the decision of others to adopt or reject the induction, but it will be remembered that the gastric branches of this pair are distributed likewise to the omentum, spleen, pancreas, liver and gall bladder, and that the pneumogastric is profoundly concerned in the circulation and functional activities of the abdominal viscera.*

Such then is the "causal relation between the two events" distinctly recognized, but not explained, by Dr Mackenzie, also applicable, we think, to the peritonitis in Maisonneuve's cases, viz Section or injury of the right pneumogastric nerve at the time of the operation.

Thus it will be seen, in the mind of the writer at least, there is added another momentous danger to warn us against, if not to forbid entirely the operation of internal œsophagotomy and leading hence to the acceptance of the carefully weighed estimate given by Dr Mackenzie in regard to the three procedures of œsophagostomy, gastrotomy and internal œsophagotomy. "From an examination of the results of the published cases, internal œsophagotomy does not appear to be a very satisfactory operation. Of the seventeen cases in which it has been practiced, four died, i. e., 23.5 per cent. This estimate includes only cases which proved fatal within fifteen days of the operation, the mortality would doubtless appear much higher if all the cases were counted in which death, though directly traceable to the operation, did not occur within the above mentioned period." * * *

"As regards internal œsophagotomy, increased experience will probably show that, though its immediate results are not so frequently fatal, its ultimate effects, when successful, are less beneficial to the patient than those of either gastrotomy or œsophagostomy." To which may be added that, considering all its dangers to life, its doubtful permanent utility, and the encouraging results of dilatation, it is an operation which hereafter must depend upon either enterprise or desperation for its adoption, and upon only accident for its success.

CONCLUSIONS

The following results may be summarized from the foregoing discussion of œsophageal strictures from chemical injury.

1st That in the definition and classification of stricture of the œsophagus, all obstructions to deglutition resulting from morbid growths or sarcoma, carcinoma, or from abscess or aneurism, bearing upon the walls of the tube, and diminishing or obliterating its cavity by extraneous pressure, should be eliminated, and that the term should be confined to narrowing from histological or functional changes occurring in the structures of the wall itself.

2nd Of stricture proper, as in other canals, the forms of organic and spasmodic exist, but in the

* In the Ophidian reptiles the pneumogastric takes the place of the organic system and it has ever been recognized as a controller of vascular action in the organs to which it is distributed. Till recently it was known under the significant name of the lesser sympathetic system of nerves.

œsophagus, on account of its muscularity, abundant supply of sensori-motor nerves and its functional intent of reflex activity—spasmodic strictures are almost invariably found to attend and to complicate the cicatricial or organic form, and often to occlude the tube under abrasion and injury when organic strictures do not exist, in a degree of themselves to disable deglutition

3d That in cases of prolonged œsophageal disability resulting in extreme emaciation and impending death, the fatal obstruction is the result more frequently of the spasmodic element, than of the modular deposit imbedded in the walls of the tube, which narrow it, but seldom alone prevents fluid ingesta. It is the frequent and long enduring attacks of *spasmus tonicus* lasting often from three to ten days, obstructing the passage of instruments and preventing nutrition, that is apt to mislead the practitioner, and by repetition compass the death of the patient

4th That a careful consideration of the anatomy and normal functional activities, as well as the habitudes and intent of the œsophagus, will corroborate the above views—for in its last analysis the normal act of deglutition is but an alternation of contractions and dilatations, by reflex excitation of muscular fibers

5th That the assumed analogy between urethral and œsophageal strictures, upon which the pathology and treatment of the latter have been based (Maison-neuve), fails in so many important particulars as to render the one a misleading and dangerous guide in the management of the other. In the one, spasmodic strictures are almost entirely confined to a particular and restricted region, while in the other, on account of its universal muscularity, its abundant nervous supply and functional reflex activity, spasm in the circular fiber, of the most enduring and tetanic character, and indistinguishable from organic stricture, is apt to be excited in all portions of the canal, by irritation of the mucous lining

6th That these spasmodic ring contractions are liable to be mistaken for, and incised as organic strictures, detrimentally wounding the sensory filaments, thus increasing the number of points for the excitation of future tetanic constrictions

7th That the assumption of a guiding analogy between internal œsophagotomy and internal urethrotomy*, will at once be recognized as still more disastrous and dangerous, when the important anatomical differences, and consequent risk, are to be considered. On the one hand, incisions in every part of the urethra, to any reasonable or even unreasonable extent, are not necessarily fatal, as both hæmorrhage and extravasation can be controlled, or guided to a harmless result, while with the case of the gullet, surrounded by and in close contact with vital parts, inaccessible to styptics, and the only dependence for arrest of hæmorrhage being spontaneous cessation, the fatality resulting from a penetration of its thin walls, and lastly, the section or wounding of the par vagum, almost unavoidable—all combine to demon-

strate that in the plausible analogy there is no parity whatever, either in conditions or results

8th That in cases so desperate as to require a cutting operation, on account of failure in every possible method of nutrition, gastrostomy would be less dangerous, and more permanently beneficial, than internal œsophagotomy

9th That in view of the spasmodic nature of the affection, early progressive and long-continued dilatation is, par excellence, *the treatment* for œsophageal stricture resulting from chemical injury, that the dilators used should be smooth and flexible, attenuated at the gastric extremity, and scaled as to size from filiform to that of the full diameter of the normal gullet

10th That dilatation may be begun as soon after the injury as inflammatory conditions will permit. The existence, or supposed existence of abrasions or ulcerations in the mucous membrane, should not delay the beginning of dilatation. The contact of the dilator, instead of increasing, actually lessens the liability to tetanic spasm, by exhausting the reflex excitability of the morbidly sensitive membrane. Hypodermic sedatives will often assist, by relaxing the tonic rigidity of the circular fibres

11th That the practice of dilatation should in each case be instituted and continued by the surgeon until fully established, after which it may in many cases be intrusted to the patient himself, or if a child, to the intelligent parent or nurse, under the surgeon's supervision

12th The length of time during which dilatation should be practiced cannot be limited to any particular period. After the deglutition of solids has become practicable, dilatation may be less frequent, as the passing of the alimentary bolus will adequately replace the action and intent of the bougie, in overcoming morbid sensibility and in restoring the natural reflexes of the tube

13th That during the treatment of dilatation rectal alimentation will be found a valuable means of supporting the patient, and since the recognition of retrostalsis as the rationale of intestinal ingestion, not only of fluid, but of semi-solid and solid aliments and since it is known that life and health have been maintained during five years by milk, eggs and meat pulps placed in the rectum, no case, even of complete and permanent closure of the gullet could be justifiably subjected to the dangers of any cutting operation for the object of nutrition until after the failure of systematic rectal feeding as an adequate and permanent means of supporting life, certainly no more unnatural and less objectionable than the dangerous expedient of making a mouth through the abdominal wall—gastrostomy. As a large majority of the cases of chemical injury to the gullet have been found to result from the careless sale and ignorant use of alkalis applied to domestic purposes and as such sale and use is more liable to increase than to diminish in the future, the legislature of each of the States and the national Congress should be petitioned through their several sanitary organizations to enact stringent laws requiring that all packages of such dangerous articles thus distributed among the

* It cannot be denied that this was the starting of internal œsophagotomy with its originator M. Maisonneuve

people shall be plainly marked with the word "Poison," and for the warning of the unlettered that the death-head shall also be prominently emblazoned upon the can, box, wrapper or other containing enclosure

THE RESTORATION OF THE PERINÆUM BY A NEW METHOD.

BY HENRY O. MARCY, M.D., OF BOSTON

[Read in the Section on Obstetrics and Diseases of Women]

The anatomy of the perinæum has within the last few years become fairly well understood, and its importance demonstrated to be greater by far than was earlier supposed. The perineal body is now recognized as an anatomical entity, and is the key-stone in the arch of perineal support. Its physiological importance in parturition has been well demonstrated recently by Dr. Hart, of Edinburgh,—an understanding of which will do much to lessen the frequent occurrence of perineal lacerations. The lesion when partial is often overlooked, indeed, the gynecologist, from his standpoint of observation, is inclined to feel that the injury, when it does not involve the sphincter ani, is in the majority of instances unrecognized. The two anatomical points most important to bear in mind in reference to the vagina and its value as a column of elastic support to the uterus, is that normally its walls, which are in close apposition, are near the vulvar outlet flattened laterally, but for the upper two thirds of its length in the antero-posterior direction. Again, this vaginal support is normally a curve, the convexity of which is toward the sacrum, and this adds much to the elasticity, and thereby aids in holding within certain limits the uterus, which in health changes its position with every respiration and movement of the body. When the uterus is in its proper position this vaginal support is applied to the lower segment of the organ behind its center of gravity, as swung upon its lateral ligaments, and thus keeps the uterine body as it were anteverted—*i. e.*, thrown forward of its lateral moorings.

When the perineal body is ruptured the walls of the lower segment of the vagina no longer retain their close apposition, but become relaxed to such a degree that in certain movements of the body they are separated, the antero-posterior vaginal folds slowly become everted, the cervical support is lost, the uterine axis is changed to a line with that of the weakened vagina, and then serves as a wedge, acting from above downwards to separate its walls already weakened, and thus may follow in procession the whole train of ills known by the various names—retroversion, retroflexion, prolapsus, cystocele, rectocele, with the changes of circulation, innervation, nutrition and disordered function of the whole pelvic viscera.

We will not now discuss the history of the operation, or the various methods from time to time recommended. Since these have been very numerous, and as the operation as still practiced varies in many of its details, it would seem to show that as yet no

one plan has been determined upon as of superior excellence. The very imperfect results obtained teach that either the operation is very difficult or the methods put in practice imperfect. The chief defect where union has been obtained lies in the fact that the perineal body has not been restored, and the resulting perinæum is thin and yields excessively when put to strain, and this is often true when the vulvar orifice has been sufficiently closed. When the laceration involves the sphincter the common failure after repair, is a vaginal opening into the rectum just above the sphincter muscle.

The use of the interrupted stitch is almost universal, no matter in what other manner the operation may vary. To this I have long attributed in a very large share the defective results, and have thought it might be remedied by the complete and careful approximation of the edges of the divided or refreshed surfaces. However, this allows a possible separation of the parts, with retention of fluid and consequent failure. The stitch may be taken so loosely as not to draw upon the enclosed portion and not lessen the depth of the triangle, but in this instance the tension is so little there is great liability to lateral separation and imperfect union. The end theoretically to be attained is simple approximation and retention, with complete rest of the parts without compression or distortion. This can never be secured by the ordinary loop of the stitch, since the force applied *must* act equally in every direction upon the enclosed portion. This is evidently true, no matter what the material used, iron or silver wire not excepted, when sufficiently plastic or yielding to accommodate itself to the surrounding parts. In homely illustration, it is the string to the bag, the opening to which is narrowed or occluded, dependent upon the tensile force applied. This is as self evident in the stitch as in the ligature, except in the degree to which the constriction is carried. Other causes of defective results, usually very little emphasized, lie in imperfect approximation of the edges of the rent or refreshed parts, lack of care in the protection of the wound from the vaginal secretions, and the direction almost universally given to the patient to restrain the action of the bowels for a considerable number of days, or until the repair processes are quite advanced.

For a considerable period I have brought the edges of the wound into coaptation by the use of the over-and-over or continuous stitch, with the same care as exercised in a facial wound, using animal suture, since this requires no subsequent removal.

The profession is indebted to Dr. Jenks, of Chicago, for that which I consider a material advance as a substitute for the usual denudation or refreshing of the parts in sutures, where the sphincter ani is not involved. It consists of a careful separation of the mucous surface from the subjacent parts without involving its integrity, and after the approximation of the denuded surfaces in the usual manner this mucous flap is allowed to fall back upon and over the wound. This is an effectual protection from vaginal secretions. In a number of instances I followed this method with most satisfactory results. *As* *nutrition*

of the flap never failed, but shrinking and shriveling, it remained as soft mucous folds adherent to the vulvar orifice. The dissection may be made without much difficulty with a sharp knife of almost any shape, the recto-vaginal septa being kept tense by two fingers in the rectum. After a primary incision a probe pointed knife is to be preferred. A good pair of scissors answers equally well.

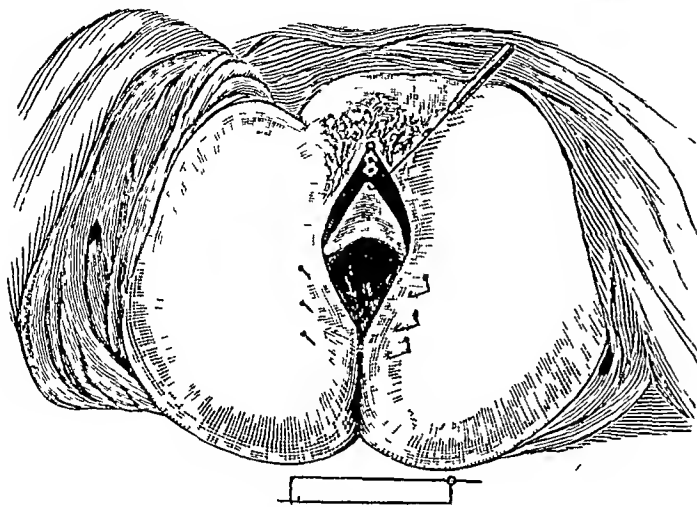


Plate I represents the denudation completed and the pins already inserted ready for coaptation and fixation by clamping

More recently I have separated the parts in a deeper layer in order to furnish a better nutrition to the superior flap, the surfaces of which are also approximated, and consequently the perineal triangle is considerably deepened and strengthened. This reduces the open wound to the shorter side of the triangle, and lessens the dangers from infection to a marked degree.

When the rent involves the sphincter and rectum the parts are divided laterally in the same manner, commencing on the line of the V separation, and each of the upset coapted sides of the triangle brought into careful approximation with continuous animal suture beginning with the rectal side.

Dr Alexander Simpson, of Edinburgh, recommends bringing the refreshed parts into apposition, when the laceration is complete, by interrupted sutures taken from each of the three sides, since he has recognized that thereby he avoids the too usual rectal fistula at the point just above the sphincter muscle.

Dr Emmett has observed that the tensile force of the stitch acting from above downwards, since this is the point of fixation, is liable to drag upon the upper angle of the wound, and thus produce a fistula; this he would prevent by an overlapping of the stitches. To obviate this difficulty, which we have above endeavored to show must pertain in a greater or less degree to the contracting force of the stitch, no matter how taken, and which must give a result more or

less defective and often productive of complete failure, we have thought to apply the retaining power only laterally, and this by a process which at least by its simplicity must commend itself to all.

It is effected by means of a double pin, the halves of which are nearly alike. It is made of German silver wire, gauge No. 20 or 22, because this material does not irritate the tissues and possesses stiffness and elasticity, qualities which are essential. The end is bent in a small loop and turned one-fourth of an inch therefrom at a right angle, and the shaft is two to two and a half inches in length, and sharpened like the point of the needle of a subcutaneous syringe.

The one-half is introduced from the vagina *within* outward quite deep into the connective tissue laterally, the direction being determined by the finger placed in the rectum, to which the pin should be parallel. The other half of the pin, similarly constructed, is introduced from *without* inward upon the opposite side in the same manner, the point of which is caught in the loop of the first part and adjusted without. Thus a kind of "safety-pin" is constructed, and when fitted to retain properly the enclosed portions the loops are clamped down by compression

forceps, and the ends cut square. This is found to hold sufficiently firm, but at first, fearing it might not be secure, I also clamped a perforated shot upon the wire. The shot renders the end of the pin less liable to cause irritation. If properly adjusted the elasticity of the wire compensates for the collateral oedema and does not impair the circulation in the en-

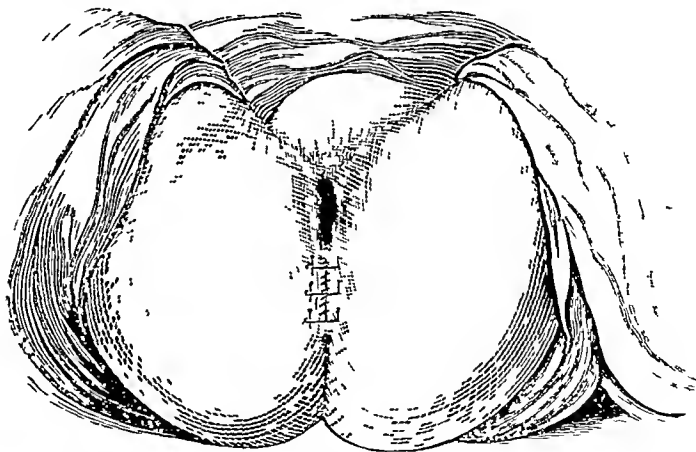


Plate II shows the operation completed and the careful adjustment of the edges by the over and over fine suture

closed parts, while complete approximation is obtained and no force is exercised in the direction of the long axis of the triangle. Two to four pins are required, as the case may demand. The subsequent treatment consists in most instances of a daily washing out of the rectum by means of a large double rubber tube with

a considerable quantity, usually three or four quarts, of water as hot as comfortable to bear. Upon the eighth or tenth day, as thought wise, each pin is gently pushed upwards and the vaginal end exposed. Each side is then cut off near its juncture and withdrawn. I have used this support thus applied to the repaired perinæum only during the last eight months, and in six or seven instances. I grant these cases are far too limited to prove very much in the demonstration of the success of this new method, but they have given excellent results, and show the easy application by simple means of a method which certainly seems full of promise.

DISCUSSION

Dr W. H. Wathen, of Louisville, said he had listened with much pleasure to Dr. Marcy's paper describing his ingenious method of uniting perineal lacerations by lateral pressure, exerted by means of the pins he has devised. These pins can be easily and quickly introduced and adjusted, and if they accomplish all the distinguished author claims for them, they are superior to the silver wire or silk suture. He could see no reason why this means of operating should not prove successful in incomplete lacerations, but where the rent extends into the rectum, he feared that the pins could not be placed well under the ends of the sphincter-ani muscles, so as to bring them in and hold them in perfect apposition. Unless this can be accomplished, the ends will fail to unite, and although there may be perfect union of the balance of the perineal body, the operation will be a failure, for the woman will have no control over the gases, and generally no complete control over the feces. As the pressure of the pins is entirely lateral, there could be no dragging upon the parts, which may prevent a recto-vaginal fistula, which is sometimes left after these operations.

He was decided in his opposition to the old treatment of constipating the bowels after perineal operations, and urged that a daily liquid stool be encouraged. This had been his treatment for years, and he had always taught the same to his pupils. He had observed that in his practice the results were better than in the practice of others who constipated the bowels. He was proud to see that the tendency of practitioners is in this direction, and was sure that in a few years the bowels will be treated in no other way. These patients should be prepared for this operation by giving a purgative every night, or every second night, for ten days, and after the operation, the diet should be of a quality that does not form much fecal matter.

Dr W. W. Potter, of Buffalo, said: Though much that has been said here this afternoon may not have been technically within the parliamentary rule, as strictly germane to the paper before us for discussion, yet I am rather glad the debate has taken such a wide range, and that so much latitude has been permitted, for there is not in the whole range of gynecological art, a subject of more practical importance, nor do I know of any more profitable way in which we could consume the same amount of time. A sound peri-

neum is such an indispensable condition to the good health of woman, so much of her happiness and comfort, nay, even length of years, depends upon a substantial perineal body, that I have almost come to look with contempt upon a member of our profession who speaks slightly of even the lesser perineal rents, and who does not take the necessary steps to secure immediate union when this accident occurs, as it so frequently does in the primiparous parturient.

But my purpose in rising was only to speak of a point or two in the after management of the secondary operation. First—I am prepared to endorse all that has been said in favor of the non-constipation plan. I would seek to promote daily, certainly after the second day, soft, pulpy stools, through the administration of laxatives, such as the comp. liquorice powder of the German pharmacopæia, *elix sennae*, etc., supplemented if need be, by an enema of sweet oil.

Second—I would dispense with the catheter if possible, and would certainly avoid prolonged catheterization after perineorrhaphy. It is, however, probable that for a day or two the bladder will refuse to act independently, and of necessity the catheter must be used. But just as soon as power over the bladder is restored the catheter should be laid aside, and the woman be allowed to pass water naturally, for the contact of healthy urine with the properly coaptated parts is no longer the bug bear of former years, since experience has clearly shown that it is not a bar to immediate union. It is, of course, necessary to use a lavement of warm water after each evacuation of the bladder, and it is also a good plan to keep the parts constantly well smeared with vasaline.

Third—For some time past I have adopted the plan, after the secondary operation, of carrying high up in the vagina a strip of iodoform cotton or lint, as a protection to the line of coaptation, the lower end of which is allowed to hang outside over the wires, and to remain thirty-six to forty-eight hours, when adhesive union will most likely have taken place. This serves a good purpose in preventing the natural secretions from working in between the edges of the wound, and makes the dressings as near antiseptic as may be in this region. That iodoform plays an important part, when judiciously employed, in promoting the process of repair in vaginal surgery, as well as in many of the diseases of the sexual organs of women, is getting to be pretty well understood, and I can bear testimony to its usefulness when used as I have described after perineorrhaphy.

IS IT FAIR? A STUDY OF THE COMPARATIVE POLITICAL POSITION OF THE MEDICAL PROFESSION IN THE UNITED STATES.

BY CHARLES MCINTIRE, JR., A. M., M. D.

[Read before the American Academy of Medicine at its annual meeting October 9, 1883.]

In this paper the assumption is made from the start that medicine has an equal claim with theology and law, to be classed as a liberal profession.

That this assumption may not be deemed presumption on the part of a physician, let us hear the testimony of others. In the *Boston Medical and Surgical Journal* of the present year (pp 108-590) there is a report of the annual banquet of the Massachusetts Medical Society. On that occasion B. A. Gould, PH D, Gott, Director of the Astronomical Observatory of the Argentine Republic, is reported to have said

"The medical was the first of the learned professions. If there was but one learned profession it would not be that of theology, for our consciences lead us to adore and reverence, nor could it be the law, but it would be the one profession which requires experience and thought and investigation."

And the Rev E. A. Horton, of Boston, prefaced his remarks thus

"Friends of the one necessary profession, you do me great honor, coming as a member of a supernumerary profession."

By common consent, theology, law and medicine are included among the learned professions—in many enumerations the number is limited to these, while, until very recent times, at least, engineering, journalism, pedagogics, etc., have had to make claims to a position not always awarded them. Thus in an editorial article in the *Engineering News* for July 21, 1883, the writer says "The profession of engineering as the term is now used, is of modern growth," and certainly the editor of one of the leading journals of the land, in writing to engineers, would claim for his calling all that would be granted to it. But whenever the learned professions are spoken of, theology, law and medicine (in the abstract, at least) are always included.

Accepting this, and reasoning *a priori*, there would be something of an equality in the character of the preparation for, in the method of entrance upon, and in the relative position of all professions classed as learned, in the present discussion of theology, law and medicine.

In a paper which I had the honor of presenting to the Academy a year ago a disparity in the preliminary training was demonstrated. I know of no investigation as to the professional training, indeed, it would be almost impossible to procure reliable testimony.¹ I had hoped at this time to present a tabular statement which would have been helpful in determining whether the facts agreed with the theory in the remaining points, but at present the returns are too incomplete for a tabular statement.

But from the uniformity of the information obtained, the following propositions are submitted as descriptive of the condition of entrance into the learned professions, and of the position before the civil authorities of the various States.

I. It is the rule in the various religious denominations and contrarywise the exception, to have the candidate for the ministry examined by some church court or council, composed in whole or in part of clergymen, on their preparatory and professional

training, and no collegiate degree, or certificate of a theological school, is accepted as a matter of course. And the license of this ecclesiastical body is necessary for his recognition by the laws of the land as a "minister of the gospel."

II. It is the rule, and contrarywise the exception, among the various courts to have the person applying for admission, not already admitted to practice by another court, examined by a committee of lawyers, who are not compelled to accept the degree of LL B in place of an examination.

III. It is the exception and not the rule, that prevents any one holding a diploma of any medical school whatever from practicing medicine wherever and however he pleases, and to be legally recognized as a physician, the profession of the locality or of the State to the contrary notwithstanding.²

If these propositions are true, and if medicine is to be classed among the learned professions, almost without volition the question arises in one's mind. Is it fair that the safeguards given to the two should alone be denied to medicine? Let a hypothetical case illustrate these propositions. Two young men graduate from one of our better colleges, e. g., Yale, with honor, and continue their studies, one at the Union Theological School, the other at the Columbia Law School, and again graduate with honor, but in neither case have they applied for registration nor been examined for admission into the professions indicated by the character of their studies. About the same time, a fellow-townsmen, never noted either for brilliancy nor persistency of mental effort, leaves home for a few short months and is graduated by some medical school—any of those not recognized by the Illinois State Board of Health. These three men return home. The pulpit of one of the churches is vacant, but closed to the young theologian because he is not "licensed." The citizens of the place desire to have a nuisance abated and have signed a petition to be presented to the court, the graduate of the law school cannot present it because the rules of the court permit only members of the bar to present a paper of this kind and he has not been "admitted." There has been a sudden death, accompanied by suspicious circumstances, because a friend of the coroner, the newly-fledged M. D., makes the autopsy, and the court receives his testimony as an expert *because of his degree*. I appeal to the common sense of our American people and ask them. Is this fair?

Possibly it might be urged that the hypothetical statement is forced, that anyone so prepared could be readily licensed in their respective professions. True enough! but where is the corresponding protection given to the sister profession?

Abandoning hypotheses, there is abundance of

¹For instance, the assertion of the State Board of Health of Illinois that many medical colleges permit students to graduate with a lower standard than their published one.

²Twenty two States and Territories have such laws (regulating the practice of medicine) good, bad or indifferent. The following States may be said to have good laws viz North Carolina, Alabama, West Virginia, Illinois, Missouri, Minnesota, New Mexico, Wyoming, Territory, Mississippi and Louisiana. Alabama requires all persons both those holding diplomas and those having none to appear before the State or county boards. North Carolina requires about the same but the penalty for violation of the law is inadequate and there is some complaint against it for that reason. The Mississippi law is new and cannot be so well judged yet.—From a letter from Dr. J. H. Raueh, Secretary, State Board of Health of Illinois, to Dr. R. J. Dunglison.

available testimony at hand. The *Boston Medical and Surgical Journal*, 1894, publishes a letter from Maine, from which the following is abstracted

"A subject which attracted a good deal of attention in the profession was an attempt to procure a law for the registration of practitioners of medicine * * * The bill provides that graduates of any institution legally qualified to confer medical degrees, and all who had practiced without a diploma for thirteen or more years continuously should be allowed to register, that all persons practicing medicine without having been registered should be deemed guilty of a misdemeanor * * * It will be seen at a glance that this was not a strong bill, for it admitted to registration the very worst of the quacks, but it was believed to be impossible to get a law which should require every physician to be the possessor of a diploma of a respectable medical school, and it was thought best to try to get one which would be advantageous in the future even if something was sacrificed for the present * * * The bill was defeated by a small majority. As usual the physicians who urged the passage of the bill only got abuse for their attempts to protect the public against the homicidal incompetence of quacks."

The reply to my inquiry as to the qualifications necessary to the practice of law in Maine, by a member of the Portland bar, so aptly makes a parallel statement that I quote a part of the letter

"By a recent statute of our State, the matter of the admission to the bar has been placed on a better footing than formerly. All examinations are in the presence of a Justice of the Supreme court, and must be satisfactory to him. They are conducted by a committee appointed by the court in each county and are partly oral, partly written. Applicants must have studied at least two years in some attorney's office in good standing, and present a written recommendation from him. The two years provision is a compromise, it was all we could get from the legislature. None are admitted without examination except members of the bar of another State, who have been in active practice and good standing for at least three years."

The legislature of Maine refuses even the apparent safeguard of a degree to the medical profession. For that of the law they insist upon an examination, their point of refusal being the length of time to be spent in law studies before coming up for examination.

In my own State (Pennsylvania), after many and hard struggles, the legislature has given us a registration law, and the same calumnies have been used with us as in Maine. Under the present statute a man was tried and convicted, upon application for a new trial (which was refused), the judge said

"Something was said during the argument to the effect that the statute in question might be obnoxious to the objection, that it could deprive the defendant of his property without judgment of his peers, or due process of law. But what vested right or property can a man have in a profession, unless he conforms to the law of the land in his pursuit and practice of it? * * * The right to compel a lawyer to persevere for a certain time a prescribed course of study,

and to submit himself to the ordeal of an examination, as a condition precedent to entering upon the practice of the profession of the law, and receiving its emoluments has never been successfully questioned, and this in the absence of any positive statute on the subject"--(*Carlisle Herald*, July 19, 1883.)

Is it necessary to search for additional evidence? McClelland, in his *Civil Malpractice*, asserts, and again and again quotes from law authorities, that the possession of average knowledge and skill is all that the law requires in any case, and more than this, the average knowledge and skill of the school of medicine which the person professes to practice, thus an Indian doctor could not be condemned if he did not exhibit the average knowledge and skill of the medicine man. A few sentences from pp. 18 and 19 will serve as a sample of the many opinions she quotes

"A physician or surgeon is responsible only for ordinary or reasonable care and skill, and the exercise of his best judgment in matters of doubt * * *

* * * A physician is expected to practice according to his professed and avowed system, where there is no particular system established or favored by law, and no system prohibited. Hence, in an action for malpractice, evidence to prove that the defendant's treatment of the case was according to the *botanic* system of practice and medicine, which he professed and was known to follow, is admissible, (*from Hilhard's Law of Torts*) * * * 'The least amount of skill, therefore, with which a fair proportion of the practitioners of a given locality are endowed' (*Bowyer's Inst.*) is taken as the criterion by which to judge the physician's ability and skill."

* * * It must be borne in mind also that the courts will take no notice of the different 'schools' in medicine, the term 'physician' being legally assumed by any one who chooses to announce himself as a practitioner of medicine (*Sutton vs Facey*, 1 Mich., 243). The law recognizes all systems as legitimate, at the same time it requires the physician to practice according to his professed and avowed system. A departure from the received canons of a given system will be taken as a want of ordinary skill (*Bowman vs Woods*, 1 G. Greene, Iowa, 441, *Patten vs Wiggin*, 51 Maine, 594)."

And so the uneducated and the sharper, like the wolf in the fable is able to cover himself with another's skin, and enter the fold without hindrance.

So in every instance the political status of the physician is beneath that of the lawyer and minister, nor has he the same safeguards thrown around him, either by legal enactment or popular opinion, that surround its twin profession so-called. Can we help asking the question, Is it fair?

"But every lawyer is not a gentleman and a scholar, neither every minister of the gospel a profound theologian and a saint, despite the safeguards," says some captious objector. Granted, but the remedy is in the hands of those who are most interested. In the county in which I live, the bar, a few years ago, adopted new rules for admission, they demanded a preliminary examination, and they made the final examination more severe, and they "pluck" applicants and send them to school or to college.

the remedy is in their own hands, if they have not prepared men it is their own fault. And all that we ask is fair play and no favors.

It might be proper to ask the cause of this sorry state of affairs. A moment's reflection shows that it is a very complex question. Mrs Stowe's *Topsy* did nought but grow, but to express the elements involved and the forces at work in the growing has been one of the problems of the ages. So here it is a generation and a growth—probably some of you would phrase it degeneration and decay. To carefully and philosophically trace the evolution of the varied and diverse elements included to-day in the term *physician*—or more vernacularly *doctor*—would be a work of magnitude, but of interest. May I hope to have the pleasure of listening to a paper on this subject at some future meeting of the Academy?

The material is not at hand, even were the skill present and did space permit, to attempt it here, but among other forces there are two which might be noted as pertinent to our subject¹. There are (a) the nature of our calling, and (b) the indifference of our profession.

Our calling is elementally and essentially personal, man to man, and all duties toward aggregated humanity grow out of this foundation duty. It exists because there is physical suffering, which excites the sympathy of those around, and the desire to relieve. With the many, the best to be done is to send for some one whom they believe better able to relieve than themselves. And the exercise of faith here differs not from its use elsewhere, it is not necessarily guided by reason. For example, let a family move into a town, and desiring a physician, make inquiries concerning them. Is not Dr X or Dr Y suggested, because he is said to be good or successful, and thus apart from any learning or training that he may have? Apply this to the sparsely inhabited period of our country, when there were few trained, and one can easily see how an entrance could be given to presumers of all sorts.

With such a calling join the indifference of the profession, an indifference which is the trunk of a manv-rooted tree, the tap root possibly being the lack of a sufficiently broad preliminary training, so that when we add the lack of pruning and cultivating, the condition of to-day is the to be expected fruitage.

To extend help to a fellow-being in suffering is commendable, it is an inevitable duty of mankind, and should be urged by no one more than the physician. But to exercise the official acts which are supposed to be the outgrowth of certain professional study and experience, to order the compounding and administering of substances capable of doing injury and inflicting suffering, to certify to causes of death, and thus to contribute to the good order of the nation—in short, the devotion of one's self to the multifarious duties known to all as the duties of a physician, and the power to receive the emoluments

pertaining to such services, should not be assumed. And it has been by the indifference of the profession that from the very beginning until now a stubborn defense of professional privileges has not been made.

These two causes working in and with the many other causes in the past, have produced the result as we now see it, and these two causes aid and abet the many causes at work to-day to prevent the growth of the reaction. For there is a reaction, and we should, as we honor our profession, throw off the lethargy that may be upon us, and endeavor by every means in our power to bring that calling we profess back to the level of her sister professions, so that whether from the State or the people, from an educational or a political standpoint should the view be taken, if medicine be not seen on a line with her sisters, it will only be because she leads them.

MORAL INSANITY.

BY WALTER HAY M D, LL D

[Read to the Tri State Medical Society, Chicago.]

In proposing a subject for your consideration and discussion, it would seem proper to present at the same time its definition—to fix limits for the scope of the thoughts which shall be occupied with it, to assign bounds for the mental operations which may comprehend it.

It would be scarcely an exaggeration to say that the most of the conflicts, arising in the course of philosophical discussion, have their origin in ambiguities of language and variations in verbal definition, rather than in essential differences of thought or opinion. Let a proposition be stated in terms so clear, to the mind of the originator, that no room seems to remain for a different interpretation, and yet differences will arise therefrom so wide and so varied as to astonish and confound the author, with the perplexity which he has occasioned.

But a duty so obvious, under ordinary circumstances, becomes impossible of accomplishment when we come to the consideration of the subject, Insanity. Out of the desire and effort to define this condition have sprung many of the errors which now complicate its study, and much of the false reasoning which perplexes investigators and deludes the world.

A verbal definition of insanity is impossible, since it is a negation, and hence cannot be defined in the terms of a positive proposition. Every attempted definition is either so comprehensive in its generalization as to include many conditions not properly belonging to the category, or so extensive in its specialization as to exclude many which come legitimately within its scope.

In attempting to define insanity, one seeks vainly for positive characteristics which may be fixed and assumed as standards of comparison, and will continue to seek vainly for definite ideas, and will find the problem of mental disease insoluble until its purely negative character is accepted and comprehended. Considering the subject abstractly, then, it is necessary first of all to submit the mind to the restriction of regarding insanity as the negation of sanity.

Sanity, of course, is a positive state, theoretically,

¹ While this paper was preparing the address of Dr N S Davis be fore the American Association of Medical Editors appeared in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. It contains a most excellent historical statement of the legal status of the medical profession but between the lines all along could be seen the above mentioned causes in operation.

and may be defined as a condition characterized by equilibrium of mental energy expressing integrity of nervous structure, or, conversely, integrity of nervous structure, expressed in equilibrium of mental energy. By energy, I mean, of course, force in action, "*ἐν ἐργῳ*," since we have no knowledge of mental force except in action.

Every mental state, then, which cannot be so characterized, is a state of insanity.

An analysis of the various forms of mental disease, in order to arrive at accurate results and a true solution of their mystery, must proceed upon the principle of determining the absence or inefficiency of normal faculties by whose action when present mental equilibrium was conserved, rather than the presence and sufficiency of morbid forces by whose interference it might be disturbed.

Now, since law is the expression of universal obligation, the essential characteristic of a law must be its applicability to all cases within its proper sphere.

Now, the principle just indicated will be found to fulfill this condition, to have this characteristic, and to be capable of accomplishing the analysis of every problem of mental disease presented for solution, or, in other words, every phase of mental aberration will be found to be a condition of disorder induced by the absence, or inefficiency, for the time being, of certain faculties or capacities by whose energy when present normal conditions were conserved.

This principle, although explicitly disregarded and ignored by the majority, has long been implicitly recognized and admitted in the technology of mental disease, as is illustrated, for example, in the designation, idiot, *idios privatus*, applied to that class of human beings whose mental faculties have never been manifested by reason of arrest in the development of the organs through which their expression should be accomplished. For while the appellation may be construed as originally to indicate one deprived of civil-rights, this deprivation was only through and by reason of mental imbecility to exercise them.

Now, the idiot is such not by reason of any deficiency primarily in his reasoning faculties or faculties of comparison. For since these have never been exercised, a judgment concerning them is impossible, but in consequence of deficiency in his perceptive capacities, whereby he fails to receive impressions upon his brain which should constitute the material out of which judgments could be formed and about which reason might be exercised.

In many examples of this class of unfortunates, deficiency of perception is quite apparent by reason of conspicuous defect in the organs of special sensation, and the subject is often perceived feebly endeavoring to supplement the deficiencies of one sense by the application of another, as for example to comprehend through the sense of touch, or taste, or smell, conditions ordinarily appreciable by that of sight, and reciprocally. The true nature of this condition has been implicitly recognized in the system of education of idiots, now well established and in successful operation in this country and in Europe.

This system consists in the education of the per-

ceptive faculties, and has for its basis progressive series of object-lessons. And there exists no grander monument to human intelligence and philanthropy than this, founded by the genius of the Abbe Sicard, developed by Itard, brought to America by Seguin, and conducted successfully by the labors of the Wilburs and others.

What has been said of the defective perception of idiots applies with equal force to the class somewhat higher in the scale of intelligence termed imbecile, or, more commonly weak-minded, although the evidence is not so obvious to the ordinary observer.

Close scrutiny of the mental operations of the weak-minded will reveal the fact that their imperfect reasoning results from original defective perception. Many, indeed most, of this class are incapable of abstract thought, their perceptions are superficial, incomplete, imperfect, comprehending but few of the attributes of objects, and their judgments, if they can be said to form any, necessarily unequal and narrow, their opinions crude, their reasoning vague and inconclusive. One who should carefully analyze the attempts at reasoning by some of this class, will perceive that the failure to arrive at correct conclusions results from incompleteness of original observation, the individual sees, as we say metaphorically, but one side of anything, and his mind responds at once to this simple impression. The mental processes of this class are analogous to the actions of the spinal cord, uncontrolled by the influence of the brain, which responds, by its reflex irritability, to sensory impressions in spasmodic, incoordinate muscular movements, without definite aim or purpose.

As the definition of insanity in general is impossible, that of its different forms is equally so. The lines of demarcation by which they are separated from each other, the basis of classification by which they are identified, are arbitrary and conventional. As it is impossible to say where sanity ends and insanity begins, so also is it impossible to fix a dividing line between idiocy and imbecility, the higher forms of the one being blended into the lower forms of the other by insensible gradations.

Under conventional systems of classification the first class is limited to those in whom the evolution of the mental faculties is arrested at some prenatal, congenital, or infantile stage, the second to those in whom it has advanced to some one of the various phases pertaining to childhood or youth.

Passing by these forms of mental defect, in which deficiency of the perceptive faculty, as the essential substratum, is more or less obvious and even conspicuous, and proceeding to analyze the typical forms of insanity in its ordinary and restricted sense, the same characteristics will appear.

In mania, monomania, and melancholia, the three types under which the various forms of insanity are conventionally grouped, delusion is recognized as the characteristic factor.

Now, a delusion is not, as it has been defined by some and accepted by the majority, a false belief, but a false ideational concept.

Belief is the assent of the mind to a proposition unsupported by evidence, being in its radical signifi-

cation opposed to evidence, which is the basis of knowledge

Delusion, however, is based upon knowledge, and is the conclusion of the mind from comparison of false evidence. If false belief constituted delusion as defined by some, and delusion be the characteristic of insanity as admitted by all, then every one would, indeed must, be regarded as insane by those differing from him in matters of faith, which is absurd.

Now, the only channels through which evidence can reach the mind primarily, are the perceptive faculties, if these faculties be in a healthy condition, impressions received through them would be correct, and their comparison would result in correct conclusions, and there would be no delusion.

Delusions, whenever it is possible to trace them to their source, will be found to rest upon hallucinations, false sense, perceptions without objective bases, residua of former impressions recalled into the sphere of consciousness by the operation of some disturbing force.

But simple delusion cannot be regarded as the absolute criterion of insanity, because even false conclusions from evidence may be reached by perfectly sound minds, from hasty and careless comparison. The true criterion of insanity is the retention by the mind of a false conclusion insusceptible of removal by sufficient evidence, constituting an insane delusion. Rigid exhaustive analysis of every case of insanity, will detect this element as the prime factor.

As in many physical analyses constituent elements are detected insusceptible of separation from their combinations, and yet clearly recognizable through their reactions, so in the analyses of some of these psychical conditions essential factors exist too vague and indistinct for independent identification, and yet recognizable through their mental correlations. This proposition is also implicitly admitted in the existence of concealed delusions, which, having eluded observation and escaped detection, sometimes during the entire duration of a period of mental disease, have subsequently been confessed by their victims, and indicated as the hidden source and origin of the insanity.

Opinions may differ regarding the source and origin or the nature of the force which we identify as mental force, or mind, since their scope is immaterial and outside of the realm of positive knowledge and within the limits of faith or belief. Such difference of opinion will and must always be. That opinions should differ however concerning the forms in which this force manifests itself, and concerning the correlations of those forms, is remarkable, since these, being within the limits of positive knowledge, are susceptible of identification and definition, and are legitimate bases for induction. Whether mental force be examined in relation to its normal operations, analytically or synthetically, whether its investigation proceed by induction from observed phenomena, or deductively from *a priori* assumption, its earliest form of energy will be found to be self-consciousness—the recognition of self and its definition from that which is not self—the *ego* and *non ego* of the metaphysicians. For it is manifestly impossible

for self to recognize that which is not itself without having first identified itself, in fact the recognition of that which is not self implicitly presumes the recognition of self.

Next in order to the recognition and identification of that which is not self—the *non ego*—comes the determination of the relations existing between these two perceptions, the reciprocal relation of the self and the non-self. The next form of mental energy is that which is exercised in the determination of the correlations of all that is outside of self in which are comprehended the highest forms of thought.

Now, whether the mind exercises its force upon that which is outside of self, or upon its own operations, this primary form of energy, self-consciousness, must underlie all of its processes as their primary and essential element.

The well organized mind will, however, so adjust its activities as to perceive the due and proper equilibrium between these various constituent forms of energy, giving to each its proper correlative influence in the accomplishment of any mental process, subordinating the self to the non-self, or reciprocally, as may be required. Indeed, the ability to so adjust these energies, and the faculty of perfecting such adjustment, are the true tests of mental soundness, the two criteria of mental excellence.

Let this test be applied to any form of mental disease, any type of insanity, and this faculty will be found to have disappeared, this ability diminished, and always in the same direction—always in the direction of the exclusion of the *non ego* restriction to the *ego*.

The first phases of mental energy to be obliterated are the altruistic, the last the egotistic. Whatever form of insanity be considered, this egotistic element will be found to constitute its predominant factor. The varied delusions of mania always present to the mind of its victim, first of all, the conviction of his overwhelming self-importance, he is the favored child of fortune, has vast wealth, gigantic strength, is some great potentate, prince or emperor, the special minister of the Deity or the Creator of the universe himself. If melancholia claim him as its victim, his delusions of sadness and woe have always self as the principal figure in their pictures of despair, he has concentrated upon himself the entire wrath of offended Omnipotence, the eye of the Almighty is closed to all other objects but him, let whatever be the *form* of delusion egotism, exaggerated self-consciousness, is its *essence*. It is common to speak of monomania as of minor consequence, since but one delusion occupies the domain of thought. Let a handful of black wool be carded into a mass of wool of snowy whiteness, let the whole be spun and woven together, and who can define the limits to which the little handful has extended? who can isolate the unmixed threads? who can indicate the portion of the fabric unshaded by the color? This metaphor is gross and material, but illustrates, not inaptly, the condition of the web of human thought into which one single delusion has been mingled, pervading inextricably and tinting indissolubly the whole tissue. A drop of ink is a small addition to

a vase of pure water, but sufficient to render impure every particle of the fluid. But to these other, and incidental forms of mental energy are superadded, which have been erroneously regarded as primary and original, and these are termed feelings.

In the physiological order sensation is the reflex of an impression upon the receptive capacities, without which impression it could have no existence, so also in the psychological order is feeling or sentiment the reflex of an impression from without upon the receptive faculties. For whether the feeling or sentiment is generated by an impression made *de novo* immediately upon the receptive capacities or recalled mediately into consciousness through the operation of the reproductive faculty, it must have its source and origin, its object, outside of the self.

Hence, there can be no feeling or sentiment without an original object from which the impression was received, of which impression the feeling was the reflex and incidental effect.

How can one feel without knowing that he feels? For a feeling which is outside of the cognition of a sentient being has no existence, is a non entity.

Now, the act of knowing necessarily presumes the capacity to know, and the subject knowing, and also the exercise of that capacity by the subject.

Hence, the assumption that "all mental action originates in feeling" is erroneous.

All feelings, whether in the physiological or psychological order, are susceptible of classification into two categories, *i. e.*, pleasure and pain.

Now, the reaction of these feelings or sentiments upon the mind induces another series of energies, wishes or desires, all having their origin and being associated with one or the other of the categories of feelings already indicated, and marking or expressing the inclination or aversion of the mind to or from any object whatever.

Now, the sum total of the inclinations and aversions in any mind constitutes its moral tone or character, which is good or bad according to the preponderance of its inclination towards that which is good or evil.

But every mental action has for its ultimate aim the allowance of some good to its subject.

Nothing is absolutely evil. For whatever may be the object of one's desire, it becomes so by reason of some good therein to the one desiring it.

Crime, however dark and revolting, is only contemplated and perpetrated by reason of some good which the criminal proposes to himself thereby, and which to his limited perception masks the evil. Considering it from his own selfish or egotistic standpoint, he perceives only the good to himself but refuses to contemplate the evil to others, the good so perceived impresses his mind, inducing therein the feeling of pleasure, out of which grows the desire to attain the supposed good, and the effort to accomplish it is suggested.

These desires constitute also the impulses or motives to action.

All action, therefore, of whatever kind, has for its ultimate origin the objective perceptions of the individual reflected in his feelings or sentiments of

pleasure or pain, out of which grow his desires or inclinations, which become the impulses or motives to action.

Without adequate perception or knowledge of an object there could be no feeling in reference to it, without feeling of pleasure or pain there could be no desire, without desire no motive, and without motive no action.

In the normal state there can be no variation in this sequence of mental energies, except by means of the interposition of the directing, controlling, governing agency of the will.

It has been already said that nothing is absolutely evil, and, that whatever be the object of one's desires, it becomes such by reason of some good to the one desiring it. For in a normal condition no one seeks that which is evil to himself, since that which is evil occasions the feeling of pain, and this induces aversion.

Hence, one who seeks evil does so either by reason of defect in his perceptive faculties, whereby he apprehends objects incorrectly, or by an effort of will diverting his actions toward an object or aim, from which in the natural order they would have been averted.

It follows therefore necessarily, if the foregoing propositions be correct, that the assumption, that out of perfectly normal perceptions, feelings or sentiments discordant therewith could arise, giving origin to abnormal desires impelling to vicious actions, is erroneous, and any theory or doctrine based upon such assumption is untenable.

This philosophical error, that "all mental action originates in feeling," in the source and origin of the modern theory of "moral insanity." For although not explicitly formulated by the originator and earlier exponents of the doctrine, this false principle is explicitly involved in every expression of it. The theory is termed modern since it had its origin in the conclusions of the illustrious philanthropist, Phillippe Pinel, drawn from his clinical observations at le Bicêtre and la Salpêtrière in Paris, during the close of the last and the beginning of the present century, under the appellations *Mane sans delire* and *folie raisonnée* Pinel—as quoted by Esquirol—designated certain forms of mental disease marked by perversion of the habits, dispositions and affections without lesion of the understanding. Esquirol, the pupil of Pinel and physician of la Salpêtrière and Charenton, while explicitly accepting the conclusions of Pinel, implicitly refutes them.

One need not go far to find the source of Pinel's ideas in the philosophical assumptions of Condillac, as developed in his *Essai sur l'origine, des connaissances*, in which he asserts that all mental energies are but modifications of sensation, which is primary.

It would be no difficult task to rearrange the cases, cited by these two great masters in medicine to illustrate the doctrine of "reasoning madness," into two new categories, *i. e.*, of delusional insanity and wilful vice.

In many of these reported cases the evidence pointing to the existence of delusion in the minds of the subjects is so clear that

escape from detection is remarkable, but explicable, perhaps, by the fact that great philanthropists are not always great philosophers, and in their zeal for the welfare of a class they sometimes overlook the higher obligation, "to promote the greatest good to the greatest number." To the condition designated by Pinel as "reasoning madness," and by Esquirol as "reasoning monomania," Dr Prichard, in England, a few years later—about 1822—applied the epithet "moral insanity."

This doctrine, thus originated and promulgated, became, about twenty years later, on this side of the Atlantic, a refuge and defense for crime.

Its first application to this purpose was in the defense against an indictment for forgery in the city of New York, about forty years ago. Since that date the practice of resorting to this theory, or some modification of it, as a defense in criminal cases has become so common that public indignation has been aroused at the flagrant violations of justice perpetrated thereby. The attention of thoughtful minds has been directed to more careful examination of the data upon which this theory is based, and these will be found to furnish no substantial foundation for it.

It has been customary with clinical observers to condemn the application of what they are pleased to term, metaphysical abstractions, to the elucidation of the complex problems of mental disease.

But clinical observation alone, without previous training of the mind in correct philosophical methods, will leave the observer very far short of attaining any adequate comprehension of the true relation of phenomena. For these metaphysical abstractions are in reality the principles which underlie the utilization of all scientific observation, the methods through which matter is comprehended.

And as method without matter is void, so matter without method is incomprehensible.

MEDICAL PROGRESS

MEDICAL WOMEN FOR INDIA—We read of the movement started in England for this purpose, and we find eloquent references to the benighted condition of the people of India, and the necessity for woman's work in that direction, as a part of the text of addresses before training-schools for nurses, and in the commencement exercises in women's colleges, until we receive it as an accepted fact that we must interest ourselves in the sending out of what are to be missionaries of medicine to enlighten a heathen country. But when we read such comments as appear in print in that country itself, such as the able editorial on this subject in the August number of the *Indian Medical Gazette*, we are suddenly but satisfactorily awakened to the fact that perhaps we are as green in our knowledge of that country as a Hatch or Villard Englishman is of this. To quote the editor, who after estimating that to allow a lady doctor to every 100,000 of the female population the number required would be 1,000 at the very least, with hospital experience and a knowledge of the language, manners and customs of the country, and a salary of £350 a year to start with, provided for and guaran-

teed, with the prospect of making £2,000 and £3,000 a year after the lapse of two or three years, (and where are they and the money to come from?), he says "It is refreshing to turn from these Utopian speculations to what is actually being done. A philanthropic citizen of Bombay—Mr Kittredge—has collected a sum of £26,975, and got the promise of £13,554 more, for the purpose of paying the salary of one or two lady doctors who are intended to have a hospital and dispensary established for the purpose of founding a hospital in connection with this movement, and a large and influential committee representing every section of the community has been organized for the purpose of promoting the objects in view." "The training of midwives of European, Eurasian and native extraction, in Indian hospitals has for many years been systematically carried out in Calcutta, Madras, and elsewhere. We know from personal experience that these women render excellent service to the community."

While a majority of the Calcutta Medical College consider the requirements of the country point rather to the provision of educated midwives and nurses than of full-blown lady doctors, the Government of Bengal has assumed the responsibility and thrown open the medical college and hospital to females, and one young lady, a B.A. of the Calcutta University, is now enrolled as a regular student. In Madras lady students were admitted in 1875 into the Medical College under special rules. One of the ladies so admitted has proceeded to England and obtained the M.B. of the University of London with great distinction. Others are reported to be usefully engaged in private practice. Think of that, ye women of America who, as the advance guard, are knocking at the doors of our universities. "Women in India have obtained liberty and encouragement to qualify themselves under the same circumstances and advantages as men for the practice of the profession of medicine, and the State is prepared to sanction their doing so."

A CASE OF EXTIRPATION OF THE LARYNX—Surg-Major K. McLeod, Professor Surgery Calcutta Medical College (*Lancet*, Sept 15), reports a case in a Hindoo clerk, 35 years of age, where a tuberculated (epithelious) growth, the size of a child's fist, occupied the front and right side of the larynx, none of the lymphatic glands of the neck being enlarged or indurated, and the tumor being clearly defined as limited to the larynx and probably right lobe of the thyroid gland, it was determined to remove it. An incision was made through the skin and fascia all around the growth, the sterno-hyoid and omo-hyoid muscles of the left side drawn outwards by a blunt hook, the sterno-thyroid divided at its thyroid attachment. The corresponding muscles of the right side being implicated in the mass were divided below it, the right lobe of the thyroid body being implicated, its attachments were divided into four sections and strong cat-gut ligatures passed around them, and the tissues divided, the superior thyroid artery bled freely in consequence of the slipping of the ligature, but was quickly secured, being the only bleeding of

any consequence during the operation. The wind-pipe was carefully dissected off the œsophagus, fixed by a sharp hook, and divided just below the cricoid cartilage. The larynx was carefully separated from the pharynx, the thyro-hyoid membrane and muscle cut through, the epiglottis severed at its base, the laryngeal attachments of the constrictors cut, and the mucous membrane of the pharynx divided beyond the limits of the tumor. A few bleeding points required deligation, and the orifice of the trachea was secured to the edges of the skin at the lower angle of the wound by four points of silk sutures. The operation occupied from beginning to end exactly one hour and ten minutes. The patient suffered slightly from shock, was fed entirely per rectum for twenty-four hours, which had to be discontinued on the fourth day owing to severe irritation of the lower bowel. From the second day onwards food was administered by means of a funnel, India rubber tube and soft catheter, through the pharyngeal orifice. The process of granulation, contraction and cicatrization in the wound, raised the orifice of the trachea to near the middle of the neck. In little over a month the wound had healed. The patient could speak in a whisper when the hole in the front of his neck was closed by a bit of waterproof, or by the hollow of his own palm. He was soon enabled to swallow by winding a narrow caoutchouc bandage round his neck, so as to close and overlap the wound. Mr W. T. Woods, surgeon-dentist, after taking an exact cast of the neck, contrived a vulcanite plug, hollowed out posteriorly, and secured in position by an elastic bandage, which enabled him to swallow soft food. Liquids were more conveniently administered by tube. To restore vocal articulation a suitable harmonium reed was let into the roof of a tracheotomy tube, secured by a vulcanite shield which closed up the aperture in the neck, this required great effort to produce sound, and the reed very soon got clogged with mucus. A tracheotomy tube was next converted into a whistle, but was found to be too small to produce resonance. A conical tube was next let into the roof of the tracheotomy tube, and a plug containing a tongue-shaped reed in a boat-shaped case dropped into it. This was found to answer the purposes of great ease of insertion and removal, production of sound with very slight effort, the viscid mucus escaped through the tracheotomy tube, and different notes could be produced by inserting plugs of different sizes, containing reeds of different length and breadth. The patient died five months and a half after the date of the operation, from disease, as indicated by the symptoms and revealed by the autopsy, with an infiltration of milary tubercles in both lungs, small vomicae in the right lung and a pint of fluid in the left pleura.

SUCCESSFUL CÆSAREAN OPERATION—On June 16, according to *Le Sperimentale* Dr Del Chiappa performed the Cæsarean operation on G. B., a primipara, aged 33, suffering from rickets. When summoned to the patient in labor, Dr Del Chiappa, finding delivery impossible, in consequence of great narrowing of the antero-posterior pelvic axis, resolved

on performing Cæsarean section. Through an incision in the linea alba a living female child was extracted from the uterus which was left to itself and not nurtured. The wound in the abdominal wall was closed by superficial and deep sutures and dressed with adhesive plasters and charpie. The temperature varied little from the normal standard throughout, only reaching 102° one day. On the fifteenth day (July 1) the wound was completely healed and the patient got up. The child continued to thrive.—*Lancet*

LIQUID OXYGEN AND NITROGEN—According to the latest researches oxygen when cooled to 136° C (213° F) liquifies to a colorless transparent liquid at the very moderate pressure of 23 atmospheres or thereabouts. Nitrogen at the same temperature, when the pressure is cautiously allowed to fall to a point not lower than 50 atmospheres yields a colorless liquid with distinct meniscus. Ozone under quite moderate limits of pressure and temperature, is a liquid of intensely blue color which gives a vapor which can only be compared in color with the brightest blue sky. Pure alcohol is a white solid at about 130° C (202° F). At a very slightly higher temperature it is luicous like oil.—*Lancet*

THE CHINESE METHOD OF DETERMINING PATERNITY—A correspondent (J. H. Lowry) of the *Lancet* gives the following bit of medico legal evidence. A basin or cup of clean water is obtained, the supposed father's finger is cut and then put into the water till some blood trickles, then the child's finger is cut and placed in the water, and if the two bloods immediately unite the proof is complete. The magistrate is sometimes bribed and the water tampered with.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM OCTOBER 5, 1883, TO OCTOBER 12, 1883

Hammond, John F., Colonel and Surgeon, leave of absence on surgeon's certificate of disability granted April 2, 1883, extended six months on surgeon's certificate of disability (Par 7, S. O. 231, A. G. O., October 8, 1883.)

Swift, Ebenezer, Lieutenant Colonel and Assistant Medical Purveyor, under the provisions of section 1 of the act of Congress approved June 30, 1883, is, by operation of law, this day retired from active service, and will proceed to his home (Par 4, S. O. 231, A. G. O., October 8, 1883.)

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING OCTOBER 13TH 1883

Surgeon Thomas Hiland granted leave of absence for one year, with permission to leave the United States.

Surgeon Wm. J. Simon and Past Assistant Surgeon M. H. Crawford ordered to report on Nov. 1st for duty on board the U. S. S. *Albatross*.

THE
Journal of the American Medical Association.

PUBLISHED WEEKLY

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address although not necessarily to be published. All communications in regard to editorial work, should be addressed to the Editor.

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SATURDAY, OCTOBER 27, 1883

AMERICAN ACADEMY OF MEDICINE.—In the preceding number of the JOURNAL we gave a pretty full report of the proceedings of this organization at its recent annual meeting in New York, and we shall have the pleasure of giving our readers the address of the president and most of the important papers presented during the sessions of the Academy in succeeding numbers. The leading object sought to be accomplished by the organization of the Academy, namely, the promotion of a higher grade of scientific and classical education on the part of young men before they commence the study of medicine, is one of very great importance.

Apparently one of the principal methods for promoting this object in the minds of those who originated the present organization, was the building up of a national medical organization of such high character that membership in it would be much sought after, and yet could be obtained only by those who had received a regular academic degree based on a full course of collegiate study prior to commencing the study of medicine. Consequently they made the possession of such a degree a condition of membership. For this they have been severely criticised in some quarters. And while we recognize, as fully as any member of the Academy, the benefits to be derived from the regular course of training furnished by our literary colleges, and would under no circumstances underestimate its value, yet the fact is everywhere apparent that simple preliminary scholastic training does not make necessarily the most successful physician, the best observer, the most successful investigator or scientist. And we doubt whether on

this restricted basis alone the organization can ever attain such pre-eminence in this country, as to make its influence strongly and widely felt in the direction desired. We recognize the commendable spirit which caused the founders of the Academy at considerable personal cost to organize it for an earnest and permanent influence in elevating the standard of education and training in the profession, and they have included in its membership some of the best men in the profession. We think, however, they would both disarm their critics and make much more rapid progress in accomplishing their great leading object, if they would no longer make the simple holding of an academic degree the special qualification for membership. But rather let this be joined to the evidence that the applicant has already made some contribution to the science of medicine worthy of recognition.

Let the doors of the Academy, as in some of our higher scientific associations, also be open for the admission of any individual who shall show the possession of *attainments*, no matter where acquired, that have served in the higher plane of usefulness and brought forth a fruitage worthy of the commendation of the scholar, and of the emulation of the student. Of such men the profession in this country has scores, holding the highest positions as teachers, writers, and original investigators, who received little or nothing of their instruction from institutions of learning having the right to grant degrees. America has ever been proud of her self-made men, and while we freely concede that there is no longer the same necessity for the home or self-manufacture which existed at an earlier period in our national development, we would also emphasize the fact that it is the *man*, rather than the manner of making, which the world has and ever will recognize. Let the Academy also recognize this, as well as the possession of a University degree, and it will speedily command a wider influence and a higher degree of success in the accomplishment of its leading object. Let it not be inferred from these remarks that we regard the career of the Academy thus far as a failure. On the contrary, we are glad to notice its steady progress.

Under the efficient leadership of its officers, this year the New York meeting has been a decided gain over those of the previous years. The number in attendance was much increased, a large number were elected to membership, and many of the papers read possessed a high order of merit. In its national spirit and high aims we rejoice and suggest a broader platform for the sole purpose of securing for it a more speedy and complete success.

THE ARMY MEDICAL MUSEUM AND LIBRARY — We wish to call the attention of all our readers to the letter signed by Drs S D Gross, Austin Flint and O W Holmes, on page 3, and to the resolutions on page 4, of the first number of this JOURNAL. These documents relate to the importance of having proper provision made for the permanent preservation and support of the Army Medical Museum and Library at Washington, by Congress. To secure this end, it is important that members of Congress should be correctly informed concerning the value of these collections, their national interest, and the great importance primarily to the education of the whole profession, and secondarily to the interests of all classes of the people. And now, during the short space of time intervening before the assembling of the next Congress, is *the time* for members of the Association, and of the profession generally, to see, or communicate directly with the members of Congress in their respective districts, and so direct their attention to these important interests as to secure prompt and enlightened action whenever these topics shall come before them in their official or legislative capacity.

Let every reader turn back to the letter and resolutions referred to in the first number of THE JOURNAL, and then do his individual duty in the matter, and not postpone it under the delusive idea that somebody else will do it better.

DOMESTIC CORRESPONDENCE

LETTER FROM BOSTON

The principal event of medical interest in this city at the present time is the official dedication of the stately building recently erected for the medical department of Harvard University. In a former letter the serious damage to this structure by fire was mentioned, which delayed its opening for four months, but this has now been repaired and great preparations are made for its formal delivery to the faculty. The event promises to be attended with unusual interest from the fact that at the same time a life size portrait of Prof Oliver Wendell Holmes is to be unveiled, which is to grace its principal hall, and a bust of Prof Henry J Bigelow is to be presented to the college. The most brilliant feature of the literary exercises is expected in the oration which will be delivered by Prof Holmes, and is supposed to be his last official act in connection with the medical department of the University. His duties as Professor of Anatomy closed last March in a most touching address to a crowded hall containing many of his students of former years, as well as the regular class of the college. The occasion was one long to be remembered, and it is eminently fitting as well as a graceful compliment to his long years of devotion to

the school that from his lips should issue the words of consecration and of welcome to the new edifice for the continuance of his life work.

The present year is prolific in the erection of structures for the teaching and the practice of the healing art in Boston. Among these may be notably mentioned the reconstructed and enlarged out patient department in connection with the Massachusetts General Hospital, which is in part a memorial to the late Dr Gay, for many years one of the surgeons to this hospital. The former building, though by no means old, had already proved far inadequate to the needs of the out-patient service, and for some years has been the occasion of serious complaints. It is thought that with a careful discrimination of patients, which I believe this hospital was the first to undertake, the present accommodations may long serve the purposes of the department with convenience to both patients and physicians. In alluding to the efforts of the managers of the Massachusetts General Hospital to suppress the abuse of its bounty by those unworthy of charity, I venture to express the opinion that in no city of the United States has this evil attained to so enormous development as in our city. This is not to be considered in any manner a reflection upon the benevolence which has for almost a century provided the means for the medical treatment of the destitute and worthy sick, nor as the indication of a desire to diminish or to depreciate the value of such benevolence, but it refers principally to a spasmodic outbreak of so-called charity which occurred some ten years ago and which has not yet entirely subsided.

During several years at about this period it was very fashionable for young physicians, either on graduating from the college or on returning from Europe, to open a "dispensary," with a glaring sign upon the outside of the building, on which the word "free" was inscribed in letters which might sometimes be seen for blocks. The means employed in the establishment of these places were sometimes amusing, sometimes ludicrous. Some of the originators worked the "church dodge," some begged the privilege of seeing such patients in one room of some convenient building, sometimes two or more aspirants for fame would unite forces and together utilize the same apartment, in fact any and all expedients were employed to attract the public, well or sick, to the particular resort of this or that so called specialist. Some few even went so far as to hire a house, attach a plate to the door bearing the name of some saint, and thus endeavor to dispose of their services without recompense to a public who did not require them. Thus matters stood for some years, until the public gradually learned that it was folly to pay for medical services which could be obtained for nothing, and before long a state of things ensued which was truly deplorable. It was found that the hospitals, the public charities and the various legitimate private sources of relief were taxed more heavily than ever before, that the means which had usually been ample were showing greater and greater deficits, and that the proportion of charity patients to the population was constantly increasing. The evil at

became so monstrous that the hospitals and the various legitimate charities organized measures for the protection of themselves and of each other and thus to some extent curtailed the widespread abuse. It was not possible, however, to prevent fraud, from the fact that these young dispensary founders still received gladly all who came. At length the disease became to some extent its own remedy, from the fact that quacks from all directions came pouring into the city, and in fact all over the State to a greater or less degree, and they also established "dispensaries" which were free on certain days or hours, to attract the attention of the public, and to win more and more of the remunerative practice from honest physicians. The reaction is apparently now thoroughly established and we hear less frequently of new projects for forcing gratuitous medical treatment upon a community which is roundly able to pay a fair fee for professional advice. To show the extent to which this systematic play of robbery was at one time carried out, it is only necessary to say that one of the wealthy and selfish professors of Harvard made the statement that his clinics were not yet overcrowded and that many more patients than he then had would be received, if they were inclined to come. It seemed wrong for the school to thus act the part of accessory to an injury which affected its own graduates, and the faculty at length saw the impropriety of such a step, and have endeavored to suppress the abuse of the clinical privileges of the college. In this connection an extract from the London *Lancet*, of June 2, 1883, is very good reading, as it shows that the evils above mentioned exist in Great Britain as well as in America, and also voices an authority upon matters of medical economy and social jurisprudence. It reads thus: "It is difficult to speak in language too severe of the recent spread of special hospitals and their rapid multiplication. The origin of many of them is due to most questionable and unprofessional proceedings. Thus they are, as is well known, often only the professional advertisements of their promoters, who by such means keep their names prominently and constantly before the public. They unblushingly apply for support in aid of hospitals, the want of which never has and never will be felt, and by innuendo cast a most unjust slur on physicians and surgeons of our large hospitals, who both can and do treat the same diseases with as much care as, and with more freedom from bias, than the specialist. The appointments to these hospitals are on a par with the rest of their proceedings. The committee are frequently the creatures of the advertising promoter and appoint as his colleagues such men as he tells them."

There is evidently an increasing interest among physicians in the American Medical Association since the establishment of a journal in the place of its former cumbersome and belated volume of transactions. Many of our men will feel that they are more closely drawn to the national Association by the appearance of its weekly issue, and what is of greater importance the fact that any good work is sure of a welcome to its pages will have the effect to stimulate many a worthy practitioner to bring forward the

treasure of his experience and observation for the common good of the whole profession. The very small number of medical journals now published makes it impossible for a large proportion of our profession to gain space for what might be of importance, and not infrequently the petty dictatorial spirit which infests some editorial minds discourages the efforts of truly valuable contributors and prevents that healthy interchange of views and opinions by which, after all, the practice of a section of country or of an entire country must be established and maintained, if it is to be in any sense progressive. It seems to be a mistake to use so much space in the reproduction of lectures and orations, which either are all to be published elsewhere, and thus crowd out the labors of active working members of the profession.

The various medical societies of Boston (and there are many—too many) have again resumed their meetings, opening with that of the section for clinical medicine, pathology and hygiene, at a recent meeting of which interesting papers were presented upon "The Neglect of Ear Symptoms in the Diagnosis of Diseases of the Nervous System," and "Karin as an Antipyretic," both of which were very interesting, and a report of which I trust shortly to forward to you. The several societies in our city and their work will form the topic of a future letter.

The medical profession has recently suffered a heavy loss in the death of Dr. James A. Fleming, one of the most brilliant and talented of the younger men in this city. His genial qualities and acknowledged ability had already won for him many firm friends without as well as within his calling as a physician, and he was honored with many posts of responsibility by those about him. His early death occurred from a low indolent type of typhoid fever contracted about six weeks ago at the annual parade of the regiment to which he was surgeon. Although he was firmly convinced of the fatal character of his illness, none of his professional attendants or friends apprehended the grave nature of the disease, and his death was entirely unexpected. He was a living example of a self-made man, who had struggled with poverty and disappointment, and had at length reached the object of his ambition, and was rapidly advancing to a high position in his chosen profession.

With the exception of the usual autumnal increase of typhoid fever, the health of this city generally is very good. Nothing like an epidemic of any zymotic disease has visited us this year. The cholera has not gained an entrance to our port, thanks to the energetic measures adopted by the Board of Health, and we have been spared the feeling of anxiety which accompanies the approach of any pestilential disease. With the completion of the new system of sewerage which collects the entire sewage of the city and discharges it into salt water at a distance of four miles from the city, it is hoped that the sanitary condition will be still further improved, and that the malignancy of diphtheria, scarlet fever and allied diseases may be thereby modified. At present, with us as with others, so far as I know, these two disorders are the subject of the gravest apprehension among phy-

The volume also contains well-prepared and valuable obituary notices of twelve deceased members, and closes with a list of members, the by-laws of the society and the code of ethics of the American Medical Association

NECROLOGY,

REYNOLDS, EDWARD, M D, of Boston, was born in Boston February 28, 1793, died in Boston December 25, 1882. He was the eldest son of Edward and Deborah (Belcher) Reynolds. The Doctor came of old Boston stock, his first American ancestor, Robert Reynolds, having been foreman and a member of the Artillery company in 1634. The subject of this sketch graduated at Harvard in 1811. He then studied medicine with Dr John Collins Warren, and then went to Europe, where he spent three years in study in London and Paris. While in London, was admitted a fellow of the Royal College of Surgeons. Returning to Boston in 1818, he began the practice of his profession, which gradually ran to surgery, on which branch he gave a course of lectures in State Street. His lectures were well attended, and continued every season for six years. In 1825 Bowdoin College, and also Brown University, conferred on him the degree of Doctor in Medicine. Doctor Reynolds, in conjunction with Doctors Jacob Bigelow, David H Storer and Oliver Wendell Holmes founded the Bennett Medical School, in which he taught surgery. In 1824, in connection with Dr John Jeffries, was founded what grew into the Massachusetts Charitable Eye and Ear Infirmary, now one of the very best institutions of its kind in the world. To this institute Doctor Reynolds devoted much time, energy and means. During the absence of Dr Warren in Europe in 1837-38 Doctor Reynolds filled his place as Lecturer on Anatomy and Surgery, delivering at the same time his customary lectures at the Medical School. He was delivering at the same time a course of lectures on physiology before the seniors in Holden Chapel. Doctor Reynolds continued his activity and interest in the profession to near the close of his life. His mental faculties seemed unimpaired to the last. Dr Reynolds in 1821 married Adeline Pratt, daughter of William Pratt, of Liverpool, England. This lady and an infant son died the following year. In 1825 the Doctor married Margaret Wendell, daughter of John Phillips, of Boston. He has one son, a physician, John Phillips Reynolds, of Boston, and four daughters, who survive him. The Doctor was a member of the Massachusetts Medical Society, the A A S, the American Medical Association since 1849. J M T

From data furnished by Dr H O Marcy

MISCELLANEOUS

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U S ARMY, FROM OCTOBER 12, 1883, TO OCTOBER 19, 1883

Hartsuff, Albert, Major and Surgeon, granted leave of absence for fifteen (15) days (par 2, S O

205, Department of the Missouri, October 6, 1883)

Huntington, David L, Major and Surgeon, by direction of the President, will, until further orders, take charge of the office of the Surgeon-General of the Army and perform the duties pertaining thereto (par 3, S O 234, A G S, October 11, 1883)

Meacham, Frank, Major and Surgeon, assigned to duty at Fort Douglas, Utah (par 3, S O 109, Department of the Platte, October 6, 1883)

Sternberg, George M, Major and Surgeon, granted leave of absence for one month, to date from October 6, 1883, with permission to go beyond the limits of the department, and to apply for extension of one month (par 3, S O 134, Department of California, October 4, 1883)

Taylor, Morse K, Major and Surgeon, assigned to duty at Fort Sill, I T (par 4, S O 210, Department of the Missouri, October 13, 1883)

Cronkite, H M, Captain and Assistant Surgeon, assigned to duty at Fort D A Russell, Wyoming (par 3, S O 109, Department of the Platte, October 6, 1883)

Heizmann, Charles L, Captain and Assistant Surgeon, granted leave of absence for six months, with permission to go beyond the sea (par 3, S O 235, A G O, October 15, 1883)

Weisel, Daniel, Captain and Assistant Surgeon, assigned to duty at Fort Fred Steele, Wyoming (par 3, S O 109, Department of the Platte, October 6, 1883)

Arthur, W H, First Lieutenant and Assistant Surgeon, assigned to duty at Fort Douglas, Utah (par 3, S O 109, Department of the Platte, October 6, 1883)

Strong, Norton, First Lieutenant and Assistant Surgeon, assigned to duty at Fort Washakie, Wyoming (par 3, S O 109, Department of the Platte, October 6, 1883)

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING WEEK ENDING OCTOBER 20, 1883

Medical Director W T Hood and Medical Inspector C J Cleborne ordered to the U S S Hartford at Panama, on duty connected with a Court Martial

Medical Inspector A C Gorgas detached from Naval Hospital, Chelsea, Mass, Nov 10 and ordered to the Naval Hospital, Mace Island, Cal

Medical Director J M Browne ordered as member of the National Board of Health

P A Surgeon A C Heffinger ordered to temporary duty at Navy Yard, Portsmouth, N H

P A Surgeon Robt Whiting granted leave of absence for three months

The orders of Surgeon W J Simon and P A Surgeon M H Crawford in last week's report should have read U S S Shenandoah, instead of U S S Trenton

Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY

VOL I

SATURDAY, NOVEMBER 3, 1883

No 17

ORIGINAL ARTICLES

THE RECENT ADVANCES OF SANITARY SCIENCE-- THE RELATIONS OF MICRO-ORGANISMS TO DISEASE

(Illustrated by photo micrographs projected upon the screen)

Address of the President of American Academy of Medicine

BY HENRY O. MARCY, M D, OF BOSTON

The unexpected honor which one year ago your kind suffrages conferred upon me in electing me to preside over your councils, I hold to be equally shared by a thoughtful discharge of the duties of the office. The profession at large may be congratulated that the American Academy of Medicine owes its origin and existence to a wide-spread spontaneity of feeling that the times were ripe for, and demanded some organized effort to aid as a controlling power in elevating the standard of medicine in our country. How well thus far we have succeeded must be left not to our own prejudiced views, but rather to the unsparing criticisms of all interested in a higher medical education. Since, by our position, we have invited it, let it arouse each one of us to yet better endeavors in the discharge of our self-imposed task. He who studies the history of medicine in a broad philosophic spirit will learn much of both interest and profit. Viewed from this standpoint, its evolution in the present generation in common with its sister sciences, marks an era in civilization. Differences of opinion, even on the fundamental factors of our polity, have and very likely will continue to exist. Other things being equal, the better trained and armed soldiery win and hold the field. Whatsoever the diversity of gifts, the profession should be actuated by one spirit. Under its guidance, moved by a generous rivalry, the divine decree of the golden rule should be its only code. In the clear light of science rationalistic medicine can have no rivals, and the *isms* and *pathos* which smack of ignorance and superstition will cease to exist. New fields of investigation yet more attractive, because nearer to the great source of truth, will open and there will yet arise a more noble emulation for the still greater advancement of a united and harmonious profession.

A few weeks since as I stood on the rock-bound coast of the bay of Fundy, and beheld its insurging tides, rising more than half a hundred feet, converting empty gorges into deep rivers, and wide-spreading meadows into broad bays, I read in this mighty

unseen force the symbol of the progress of our age. The quiet waters of the harbor of Louisburg whose blue expanse covers the wrecks of the French and the English armadas of a past century, at whose stormy burial sank the hopes of nations, who would fain have founded in a new world empires based upon the aggrandising ambitions of kings and clergy, gave no hint save in the mournful desolation of its shores of a fatal policy which so long dominated the ages of the past. In the busy sub-divided occupation of happy peoples, each individual adding to the common store of good, national interests interwoven in one grand commonality by the iron bands of commerce, we mark the monuments of our age, in the elevating of the masses to a higher plane of intellectual and moral development than the world has ever seen.

In the proud contemplation of such progress, the thought arises, have the science and art of medicine grown in ratio with the general development of the age? To discuss a question of such magnitude in the short hour at my disposal would provoke a smile. And yet, stimulated by the belief that, although proud of present progress, we are on the eve of far greater discoveries and clearer knowledge, we would counsel and urge upon the Academy the greatest devotion and most enthusiastic zeal in elevating the standard of medical education.

The late lamented Dr Edward H. Clarke, of Boston, whose memory is enshrined in the loving remembrance of many classes of pupils, divided the teachings upon *materia medica* into a course for two years, one devoted entirely to the *circumsusa* of the patient, and one to the *medicines* which might be administered. In a somewhat similar spirit I would divide the duties of our profession, and would place first the prevention rather than the cure of disease.

Sanitation can hardly be called a science. Many of its most important factors are, at the best, but imperfectly understood. The sanitary laws instituted by Moses are based upon principles which cannot be under-estimated or ignored, and the Egyptians for centuries previous had understood some sanitary questions and their solution better than ourselves. The traveler to day may see in the elegant courts of the old Pompeian houses the marble basins, with their leaden pipes and stop cocks still seemingly ready to turn the treasured waters of the distant mountain into their old time-accustomed chambers alike to bath and fountain, and go again singing in joyous cadence, ministering to need and pleasure as it found their way through a city to

bay below Our modern systems of water carriage to remove sewage, is but the adaptation of means to ends well recognized by the ancients, and it would to day be difficult to find a better specimen of sewer or masonry than the Cloaca Maxima of old Rome That age of Grecian prosperity and extraordinary intellectual activity, which gave to the world Pericles, Sophocles, Aristophanes, Pindar, Plato, Xenophon, and Socrates, also furnished Hippocrates, the father of medicine He it was who formulated the fundamental principles of sanitary science, "Pure air, pure water, and a pure soil" The little island of Cos was his home, and here was located one of the most celebrated temples of the Asclepiadæ, or priest physicians of the Greeks If Hippocrates, living upon this pearl of the Ægean archipelago, whose leafy groves were musical in the evenly-tempered, balmy breezes which ever played in health-giving zephyrs, whose gentle rills were fed from springs gushing forth the distilled dews of heaven, whose verdant slopes, basking in the clear, warm sunlight, were kissed by the deep blue waves of the Mediterranean, the very place of ideal purity and loveliness, recognized the importance of such maxims, what should be their value to the multitudes crowded at the behest of commerce in localities selected without thought of sanitary surroundings?

The discussion of the problems of life, and the important factorage of ills thereto belonging, by the wise and thoughtful of the ages long ago, is not alone instructive, but has a fascination of its own Whatever else may be said of Mohammedism as a code of morals and virtue, its cardinal principles of cleanliness and careful living deserve special recognition at the hands of science The great plagues of the middle ages and the desolations following the crusades which swept over Europe, were filth diseases of a preventable character Although spurred into recognition by the bitter experiences of the passing generations, sanitary science is yet under only partial recognition of the laws, and a popular interest is scarcely aroused, even among our more intelligent classes of citizens

The vital processes, in their sway over matter, hold the balancing between waste and repair This hypothetical equilibrium is perhaps the best definition of health, and the safe removal of the waste, worn out material is one of the chief factors of sanitary science This to the individual is ordinarily situated, might seem a question for easy solution In the wide stretches of country surroundings, although there are many exceptions, this is generally true, but in the crowded conditions of city life there is no problem more pressing or complex The law of decomposition is *vital* rather than chemical, and in the changes which ensue there are reproduced in the most marvellous abundance lower forms of microscopic vegetable life, which in their death-dealing danger are far more potent than the evolution of noxious gases The relation between the house we occupy, its location and surroundings, its water supply and the best means of removal of waste, are as yet but imperfectly understood The local causes in the production of disease are occupying in a greater de-

gree at present than ever before the best scientists of the medical profession Although many vital points are yet undetermined, great progress has been and is being made It is sufficiently established that the water drunk, which is contaminated with the specific infection of cholera, typhoid fever, and other diarrhoeal diseases, will at least in certain conditions of the system reproduce these diseases, and if these conditions are widespread an epidemic will ensue A similar law holds good in reference to malarial or intermittent fever, although it is very probable the sources of contamination are not confined to the water supply alone Heat, moisture, and the resulting decomposition are the seeming gross factors, but it is quite certain that minute living organisms introduced into the system are the potent factors in the production of these diseases

The condition which this age of steam brings, with its modern miracle of civilization, massing the population in great centers, gives new sanitary problems of a very difficult and complex character

Surrounded by a media from which there is even momentarily no escape, and which we must ever breathe, atmospheric impurities must be considered as of the highest importance The air has no absolutely fixed normal composition, however, its two essential elements, oxygen and nitrogen, under ordinary circumstances, are so nearly invariable, they may be regarded as stable factors Although, in a simple mechanical mixture, the air is very rarely free from carbonic acid and water, yet carbonic acid, so far as known, is a harmless, but superfluous agent to the animal economy, while, on the contrary, to the vegetable world it is food of the most important character Some plants go through their entire period of evolution, dependent only upon this element and water The mechanical admixture of water in the form of vapor is a constantly varying factor, dependent upon location, climate, temperature, etc., and, although rarely entirely absent, is of itself an element comparatively unimportant but, combined with other factors, it makes possible the development of lower orders of the vegetable organisms, to which we are now warranted in ascribing some of the most dangerous and widespread diseases of the entire animal kingdom In its indirect bearings upon climatology, influence upon heat, etc., atmospheric moisture is of the first importance

In the analysis of air, ozone, from its admitted powers, especially in its bearing upon climate and health, should be carefully considered It is an allotropic form of oxygen which has attained new properties, of an intensely active character, supposed to have been chiefly produced by the action of electricity Its molecular weight is 48, oxygen 32, and its density is about one and one-half times greater than oxygen According to Houzeau, the maximum quantity of ozone in the air never exceeds $\frac{1}{10000}$ part of its bulk, and it is often entirely wanting More ozone is found during the night than the day, in winter than in summer, upon high rather than low lands, in country than in town, and most of all, after a severe thunderstorm

Ozone owes its great value as a disinfecting agent

to its exceedingly powerful oxidizing qualities. The compounds of ammonia, phosphorus and sulphur are acted upon with great rapidity, and the odors resulting from animal decomposition are removed instantly. It is probably destructive to all the minute vegetable organisms when in active development, but its effect in destroying the vitality of the spores of plants has not yet been determined.

From the exceedingly active properties of ozone in destroying the low forms of vegetable organisms, and consequent prevention of putrefaction, as well as the induction of catarrhal affections, when experimented with artificially, the important query of its value as a factor of atmospheric composition, and its relationship, if any, to epidemic diseases, has arisen. A committee of the American Medical Association, under the efficient leadership of Dr N S Davis, of Chicago, during the last three years has been doing a considerable amount of work in the solution of this important, but complex problem. Under their direction, careful tests to determine the amount of ozone in the atmosphere are daily made in a number of our large cities, in which localities clinical records are taken by a number of independent observers, to ascertain the initial date of acute diseases. Reports of progress have been made, but sufficient data have not yet been secured to warrant any general conclusions. The committee desire a wider interest and assistance in the further accomplishment of a work which promises to be of great value.

11 There is much evidence in favor of adopting the analysis for oxygen, instead of that of carbonic acid, as a test of atmospheric purity, the test would be an absolute one, if we could be sure of the uniformity of the proportion of oxygen in pure air. Taking this, as we probably may, for granted, we can say that the carbonic acid, in most cases, increases directly at the expense of the oxygen of the air, and therefore a diminution of oxygen points logically to an increase of carbonic acid. There is this disadvantage in taking the oxygen test, it removes from view the accidental impurities, such as the discharges from chimneys, which are certainly important."

Carbonic acid is a product of combustion, and in its formation represents in nearly fixed ratio the destruction of oxygen. The entire animal kingdom is constantly consuming oxygen and emitting carbonic acid, and atmospheric conditions dangerous to life would ensue, were it not for the equilibrium maintained by the consumption of carbonic acid and generation of oxygen by vegetable growth. Owing to the remarkable diffusion of gases, the wind currents, etc., the immense amount of carbonic acid poured out into the air as the product of combustion never produces atmospheric changes in any marked degree. It is estimated by Smith that in Manchester, from this source alone, over 15 tons of carbonic acid are produced daily, and yet, when this is added to the product of respiration and animal waste, he found the entire quantity was not sufficient to raise the average percentage above four parts in ten thousand, which is within the so-called normal limits of a num-

ber of investigators. The decided increase of carbonic acid in cities is due mainly to the confinement of air in courts and alleys, and the sanitary lesson should be, the construction of wide streets with open courts or squares.

Too much importance has been placed upon carbonic acid as a deleterious constituent of the atmosphere. Very little, if any, annoyance is felt from the accidental escape of pure carbonic acid in the charging of soda fountains, although the air may contain two per cent of the gas. Forster states that he had no difficulty in remaining ten minutes in a cellar containing fermenting wine, although the carbonic acid gas amounted to forty parts per thousand.

There is a vast difference when the oxygen is lessened in proportion as the carbonic acid is increased, as, for example, the entering of a chamber where candles are burnt until extinguished for want of oxygen, or again, where the carbonic acid is produced by respiration. The presence of this gas in living-rooms in any appreciable quantity is of the first importance, not so much as a deleterious chemical agent, as because of the bad company in which it is found, and the presence of which it indicates. One serious objection to the numerous gas jets of the brilliantly lighted salon and audience room is found in the fact that the ordinary burner consumes as much oxygen as four persons. From a sanitary standpoint, lighting by electricity will be a great gain, and this evil will be obviated. One large room in a Lowell mill, lighted by 400 gas burners, had been ever a source of complaint in its defective ventilation and great heat. Lighted by electricity, the change was surprising, while the difference in temperature was over twenty degrees.

Products of decomposition from cess-pools, the organic exhalations from respiration, the lessening of oxygen from the combustion which is going on in brilliantly lighted rooms, all these are dangerously infective and devitalizing elements which demand a system of ventilation usually ignored in modern house construction.

From the address upon State Medicine before the American Medical Association at St Paul, 1882, by Dr Gihon, Medical Director, U S N, I quote, all too briefly, "So long, however, as society in its highest development of rank and culture, ignorantly jostles and wedges itself in contracted parlors and drawing-rooms, already defiled by blazing gas-jets and defective furnaces, where hundreds of lavishly dressed human machines befoul the air and poison one another with the noxious gases and their own effete animal products in deadlier quantity than the ragged rabble which herd in the open street, and call this pleasure, so long as godly people drowse and yaw in badly ventilated churches surcharging their brains and impairing their minds with blood not half aerated, and ungodly ones exhaust their whole reserve force to resist the insatiable influence of the no less badly ventilated theater and exhibition hall, and call the one pious worship and the other rational amusement, so long as men toil to amass riches and then build residences palatial, or sham palatial, and in the of luxury and rest—

¹ The Atmosphere By D F Lincoln M D Ziemssen & Co Leipzig Vol VIII page 603

light and heat to consume the oxygen which prince and beggar must breathe, and admit the invisible filth by the sumptuously decorated closet and bathroom by which they think to exclude the vile necessities of humanity which prince and beggar alike cannot escape, and call this comfort and refinement, so long as our children are sent to overcrowded and unwholesome schools, where their eyes are bleared, their hearing dulled, their plastic bodies distorted and their brains fuddled, and call this education, so long as men and women violate daily in themselves and in their children the simplest precepts of hygiene, parents countenancing half-dressed daughters wearing out their strength in unwholesome ball-rooms, seeking their slumber that cannot refresh only when dawn appears, sons launched upon the world to encounter physical wreck in a thousand channels where no beacon warns of danger, old men, senators, judges, divines, perchance learned doctors, uncomplainingly breathing the foul air of public conveyances and apartments in which every door and window have been carefully closed and ventilator carelessly ignored, streets reeking with filth which decrepid laborers play the farce of sweeping in broad daylight, what can State Medicine hope to accomplish in legislative chambers and halls of Congress which are themselves *even* evidences of sanitary ignorance, sanitary neglect and sanitary indifference?"

The foreign ingredients of the atmosphere are very various, as dust they are carried great distances by the wind and deposited often hundreds of miles from their source. African organisms have been found in the air of Berlin. It is often difficult to obtain air free from the pulvulent debris of vegetation, and both vegetable and animal organisms abound. From the vegetable kingdom come pollen, vegetable hairs, fibers, scales, cells, seed capsules, etc., also spores of fungi and various forms of bacterial growths in marvelous abundance. In the air of living-rooms we may find portions of food, animal and vegetable fibers, pus globules, fatty crystals, scaly epithelium, and a number of the micro organisms.

¹Dr Sternberg, in his report to the National Board of Health, says "The fact, observed by myself, that during the summer months the mud in the gutters of New Orleans possesses an extraordinary degree of virulence, shows that pathogenic varieties of bacteria are not alone bred in the bodies of living animals. The more I study this subject the more probable it seems to me that in this direction lies the explanation of many problems which have puzzled epidemiologists, and that the sanitarians are right in fighting against filth as a prime factor in the production of epidemics, a factor of which the *role* is easily understood, if this view is correct. The presence of septic organisms, possessing different degrees of virulence depending upon the abundance and kind of pabulum furnished them, and upon meteorological conditions more or less favorable, produces, in my opinion, the *epidemic constitution of the atmosphere*, which wise men were wont to speak of a few years ago as a cloak for ignorance. It must be

remembered that the gutter mud of to-day, with its deadly septic organisms, is the dust of to-morrow, which, in respiration, is deposited upon the mucous membrane of the respiratory passages of those who breathe the air loaded with it."

The spores of certain forms of these lower orders of vegetation have a remarkable vitality. They are of extreme minuteness, often less than a two hundred thousandth of an inch in diameter and have resisted a dry heat quite above boiling water. Tyndall was the first to make popular the test of a beam of light through the air as one of the best to show the presence of minute particles. Indeed, it is only owing to these particles that the beam of light is revealed, for in purified air it ceases to be visible, and air thus purified no longer possesses the power of exciting putrefaction in albuminous fluids previously sterilized. From the almost universal presence of these minute forms of micro organisms and their difficulty of exclusion arose the belief in spontaneous generation. Owing to a better knowledge of these organic constituents ever present in confined spaces and the dangers therefrom to wounds, has arisen the revolution in surgery during the last decade.

By a slower process because beset with far greater complications and difficulties, there is being surely evolved the so-called germ theory of disease which, although not dependent upon the atmosphere alone for the spread of contagion, is the more usual medium for the dissemination of infection. The organic matter exhaled from the lungs is molecular and is disseminated by atmospheric currents. The odor from the decomposition of these organic elements is generally perceptible when the carbolic acid reaches 7 parts in 10,000, and is strong when it amounts to 10 parts. The microscopic examination of these exhalations into the air of crowded rooms, when condensed with the vapors upon the cold glass of the window often shows them to be undergoing decomposition, in the process of which are developed coniferoid growths intermingled with myriads of bacteria and micrococci. One danger from tuberculous patients may be found in the careless disposition of the sputum. This not seldom falls to the ground, is pulverized and distributed as dust. In respiration of the atmosphere thus infected the bacilli are lodged upon the mucous membrane of the lungs. In the laborious researches recently published of M Vignal, of Paris, upon the bacillus of tubercle, he dried in a flat receptacle some sputum containing bacilli, this he afterwards pulverized, then moistened and subsequently dried. The specimen was in this way moistened and dried eight times, and the bacilli were as abundant as in the fresh sputum.

Owing to the multiplicity of agents and causes rendering air impure, its analysis has, as a rule, been very uncertain and unsatisfactory. The term albuminoid ammonia, much used in the analysis of air as well as of water, has usually represented a whole series of unknown factors. Like amaurosis of the eye by the older writers it gave a learned phraseology to ignorance and disfigured science, much in keeping with the making of the geographical map of our boyhood, where the vast unexplored region of the terri-

¹Special Report to National Board of Health April 30 1881

tories this side of the Rocky Mountains was called the Great American Desert

It was first noticed by Gay Lussac that all the nitrogen of organic matter when heated with caustic hydrates appeared as ammonia. Albuminoid compounds, when disorganized by the growth of the lower forms of organisms, set free ammonia, and the quantity of the free ammonia may, in a general way, serve as a standard to indicate the amount of decomposition which has taken place.

The term albuminoid ammonia on the contrary, stands for the quantity of nitrogenous material in air or water which may serve as food for the growth of these infinitesimal organisms. This as yet undecomposed organic matter is not by any means in itself necessarily hurtful, although always objectionable. Combined with moisture at ordinary temperatures, it furnishes the condition for bacterial growth and may prove sufficient for the development and spread of an epidemic of some one of the class of contagious diseases. We can have no chemical test for discriminating between hurtful and harmless organic matter, since the poisonous infection is vital and where found must ever be looked upon with suspicion.

I take great pleasure in referring to the microscopic investigations of atmospheric impurities by Surgeon J. H. Kidder, U. S. N., Washington, published in the report of the Surgeon-General U. S. N. 1881, and continued in report for 1882 by Passed Assistant Surgeon T. H. Streets.

The material for examination was collected by the use of a funnel-shaped instrument connected to a winged vane causing the opening to face the air current, which is made to impinge upon a slide placed horizontally, a portion of which has been moistened in glycerine. In out-of-doors air thus collected and examined he enumerates the following substances as the most important:

- 1 Epithelium from the skin and mucous membranes
- 2 Vegetable epithelium and unrecognized debris
- 3 Hairs and threads of various fabrics
- 4 Particles of sand, glass, metals, soot and starch
- 5 Parts of the chitinous shells of small insects
- 6 Bits of feathers and the pappus bristles of composite plants
- 7 Minute, highly refracting dots, simulating *micrococcus*
- 8 Crystals of various forms and sizes
- 9 Pollen spores of many different kinds
- 10 Leaf hairs
- 11 Mycelium and spores of fungi
- 12 Nucleated cells resembling leucocytes
- 13 Bacteria, as *bacterium*, *vibrio*, *bacillus* and *micrococcus*, and under the forms of aggregation known as *zoogloea*, "swarms," *leptothrix* and *torula*. Dust collected dry, by simple exposure of slips and disks to the air, contained sand, soot, etc., and numerous crystals, mostly rods and radiating needles. And, finally, the disks and tubes containing collections made in hospital wards abounded in epithelium, starch, cells resembling leucocytes, and threads and hairs. Epithelium, as appears from the foregoing summary, is al-

ways and everywhere present in the air. Considering the probability of the communication of contagious exanthemata by this mode, the constant presence of epithelium in the air becomes a fact of considerable hygienic importance.

Minute, highly-refracting dots, very numerous in winter dust, are likely to be mistaken for *micrococcus*, especially when mounted in fluid and agitated by the Brownian movement. "They are usually the most minute parts of coal ashes, and may be distinguished from organic forms by the fact that they are not affected by strong sulphuric acid. After a long series of observations I am, however, constrained to believe that there is no absolute reliance to be placed upon identity or similarity of form in the recognition of crystals occurring in dilute solutions."

In the sanitary investigations of Dr. Streets, the cultivation of the organisms of atmospheric dust gave most interesting results. The rare form of *bacillus ruber* accidentally appeared in some of the culture tests and was made the subject of a number of laboratory studies and from their cultivation the air of the laboratory became so completely infected with them that unless extraordinary care was exercised they appeared as a pervading element in all cultures.

From my own laboratory studies I have been made aware of the great difficulty in excluding germs during the manipulation of sterilized nutrient fluids. To the special student, Dr. Street's observations are of great interest. I cannot forbear quoting concerning his growing the *bacillus ruber* upon rice under a bell jar in a darkened room. Whenever the bell glass was removed the nostrils were greeted by an agreeable odor of apples, several persons noticed it. The *bacillus* (Beck's No. 10 immersion) was shown to be in single rods or two joined together, rarely four or more united. Each rod enclosed two brightly refracting granules usually one at either end. The movement of the rods was active and perpendicular to the stratum of liquid in which they swam, moving points only were seen coming apparently in contact with the thin glass cover, as their motion became less active the rods floated horizontally in the liquid.

A proper discussion of the impurities in water would far exceed the limits of this entire paper. Chemically pure drinking water is neither necessary or wholesome. Soaking into the earth certain mineral constituents must be present in varying quantity. These have long been recognized and may be easily determined. In all natural waters there is more or less organic matter in solution. This is reduced to the minimum in the supply from springs and deep wells properly protected. Organic material may not be harmful, dependent upon its character, dissolved vegetable material may deeply color the water, or the low form of algae give it a very disagreeable taste without being especially harmful, on the contrary clear, sparkling, tasteless water may contain impurities in the highest degree dangerous. Water containing albuminoids in solution, if allowed to become standing is sure to undergo deleterious changes, from its infection by the ever present atmospheric germs which utilize these products as food.

bers utterly beyond conception. It is owing to such infection that the water draining from swamps and marshes, especially in hot climates has ever been a prolific source of intestinal diseases.

As in the discussion of atmospheric impurities, we found the ever-present moisture an important factor, so in the treating of the water supply, soil pollution must be necessarily therewith taken into consideration. In this relation no question is more important than the power of the soil to purify water by filtration and the retention therein of injurious products. The albuminoid compounds may here be utilized as food for the higher order of plants, and thus be extracted from aqueous solution. Under the influence of sunlight oxidation destroys many of the lower growths, and air and water both thus become purified. It has long been recognized that certain soils in time lose their ability to filter out the impurities from polluted waters. Many cases of disease and even epidemics have been traced directly to the use of water containing sewage that had passed a greater or less distance through the soil. It is apparent that this danger has been greatly underestimated by all classes. The specific contamination of the ground water and thereby of the supply for household use, is the more common and wider spread source of certain of our most dangerous diseases, the example of which best known is typhoid fever. It is also an established fact that the air which every where permeates all soils to the ground water moves in consonance with every barometric change of the outer atmosphere, these air currents, also modified by heat, are of importance from a sanitary stand point. Every vault, every cess-pool, is a source of pollution, and these sub-soil air currents are drawn into our cellars from all directions when they are used as is the custom in most of our northern cities, as the source from which the heat in winter is distributed through the house.

The recognition of this danger caused the National Board of Health to institute a very elaborate series of investigations in order to determine the extent to which different soils are able to filter the injurious properties out of the air passing through them. The most interesting report upon "the relation of soils to health," by Profs. Smith and Pumpelly can here only be referred to. Their conclusions show the utter worthlessness of sand as a filter for germinal matter. Our government in no wiser way could aid in the general well-being of her citizens than by the continuation of such investigations.

"The facts here brought out seem to us of importance considered with reference to the sources of supply of our drinking waters, the relative location of wells, cess-pools, etc., in our towns, and also with references to the methods of removal of excreta, especially during the prevalence of an infectious disease, the infectious materials of which may be communicated through water. A good bed of sand has commonly been regarded as one of the most efficacious forms of filters, amply protecting our well water against all contamination, even though the wells be sunk at no remote distance from sewers, cess-pools, cemeteries, etc. But we see that sand utterly fails to remove germs of putrefaction, such as are

normally found in the air and in water from liquids while its power of absorbing dissolved matter, organic or inorganic must also be seriously questioned."

The subject of germ transmission through the soils demands on the part of sanitarians the most searching investigation, not only on account of the possibility of contamination of our drinking waters, through infiltration of germs, but also because the air especially in our dwellings may become infected if the soils in their natural condition possess no power of retaining germs or their adult organisms. For whenever in an infected soil the ground water from any cause rises to the surface, germs may be carried with it, and upon drying be taken up by the atmosphere."

The importance of a supply of pure drinking water cannot be over-estimated, and its pollution is in a very large degree due to germ contamination. This is no exception even in sparsely settled country districts. In New England, almost entirely exempt from malaria, the danger from specific contamination of the drinking water is shown in the marked increase of typhoid fever. In Massachusetts alone there occurred, from 1840 to 1880, 390,000 cases of typhoid fever and 40,000 deaths.

In the military service, during the late bloody contest between the States, zymotic diseases caused a larger number of deaths than resulted from all the battles of the entire war. We quote from the report of the Surgeon General "The entire number killed in battle and died as the result of wounds was 93,443, died from disease, 186,216, died from zymotic diseases alone, 108,666." If to these hecatombs of victims, sacrificed in the vigor of early manhood, we add the suffering represented by over 1,700,000 reported cases of diarrhoea and dysentery, and 1,100,000 cases of malarial fever, every village and hamlet of our broad domain still having its representatives of wrecked humanity from these causes, we gain some idea of the dangers resulting from insanitary conditions, although our armies were in service in a mild climate, and the best clothed, fed and housed soldiery the world has ever seen.

The number of deaths in the United States during 1880 from diphtheria alone, was 38,398, a proportion of 51.33 per 1,000. From typhoid fever there occurred 22,905 deaths, a proportion of 31.21 per 1,000.

These terrible scourges, like consumption, are the messengers of death which make their daily visitations, and to which people have become so accustomed as to regard their ravages as the inevitable, or, as the clergy have been wont to express it, "the hand of divine Providence laid heavily upon us." The medical profession talk learnedly of the wise means adapted to the cure. Different schools of pharmacists have their vaunted remedies, but the sad, humiliating lesson of the mortality tables teaches that these invisible monsters are stalking broadcast over the land, seizing prince and beggar alike in their remorseless grasp.

Since the history of man, the wise of all generations have sought for the cause of disease, yet it would

appear that the key to many of these labyrinthian mysteries has been reserved as one of the triumphs of science for the latter part of the nineteenth century. It is now generally conceded that the danger to wounds is a particular organic infection, which, like the virus of inoculation or vaccine, germinates and induces systemic poisoning. The whole subject of modern wound treatment is based upon the recognition of this ever threatening danger, and securing the best means of its avoidance. This recent recognition of the dangers from the simplest form of microscopic vegetable growth, has evoked the important question of the means best adapted for their destruction. Extremes of heat and cold are by far the most universal, and are the wise measures which nature has adopted as limitations to their development. For a long time carbolic acid has been the surgeon's *sine qua non*, and the agent most trusted for the disinfection of the sick-room. A long series of careful laboratory investigations conducted under my supervision have given results not unlike those of Koch and Sternberg, and place the bichloride of mercury pre-eminently at the head of the list of germicides.¹ The solution of one part to 2,000 is as trustworthy as the 1 to 20 of carbolic acid. Properly marked to guard against danger, such a solution may be wisely brought into requisition in every household. Under the light of its new values, preparations of mercury in certain diseases are likely to be restored to their old-time professional confidences, and teach that the clinical deductions of the fathers were not without foundation in fact.

The first of the diseases, and the one the clear history of which is perhaps the best known, is anthrax, or malignant pustule. Here the rôle of specific micro-organisms as cause and effect has been conceded. No more interesting subject could command attention than the analysis in detail of the entire group of zymotic diseases. In a purely conservative sense it is not too much to claim, that it may be shown that each of these affections has its origin from, and owes its dissemination to, a *contagium vivum* of a definite, particular character. We do not, however, intend by this to convey the meaning, that our knowledge as yet, if ever, enables us to differentiate each individual factor.

In the light of recent astonishing discoveries, no wise man would prognosticate a limit to our future knowledge in this direction. Certainly, the greatest progress in medicine since the days of the fathers is this pertaining to the causes of disease. It is not too much to predicate as possible, or even probable, that the medical art, in the near future, will hold control over the entire class of zymotic diseases as effectually as vaccine has controlled and relegated to an almost hypothetical danger the terrible scourge of small pox, which ravaged humanity during the many centuries of the historic past.

The laborious researches of our distinguished friend, Dr Henry I Bowditch, in establishing the relation of soil moisture to consumption, builded for himself a monument more grand and enduring than granite or bronze. The ineffable something of the existence

of which he was equally sure, remained for younger eyes to discover, and the patient, painstaking labors of a well-trained German student to demonstrate the specific bacillus tuberculosis.

It is very probable no publication of modern time has awakened so much discussion or caused the undertaking of so great an amount of study and investigation. Dr H C Ernst, of Boston, read an exhaustive paper in part—a Contribution of Laboratory Work, before the Massachusetts Medical Society in June last. He made a table of references to fifty publications upon the subject, and I am quite sure I have seen nearly one quarter as many more articles published since this date worthy of reference. Dr Ernst's conclusions are as follows:

I A staff-shaped micro-organism exists in all forms of the tuberculous process, and its presence has been demonstrated in them.

II It is more abundant in the rapid than in the slow form of the process.

III Its specific nature as the cause of tuberculosis is claimed by Koch on the ground of his observation.

IV Its specific character has not been successfully refuted by trustworthy observations.

V Its value as diagnostic evidence of tuberculosis is very great, although its absence cannot be considered as excluding that process.

The latest novelty in the germ theory of disease is found in the ingenious exposition of the yeast fungus as the cause of diabetes, by Prof Eklund, of Stockholm.¹ It is offered as theory rather than demonstration, and yet the array of facts brought to support this explanation if not conclusive throws at least new light upon this disease which has ever been considered a dark enigma.

Dr Hassall communicated a paper upon the Development of Torulæ in Urine to the Royal Medical and Chirurgical Society of London, in 1853, in which he arrived at the conclusion that there is a species of fungus which is developed in urine containing even minute traces of sugar which may be considered characteristic since it occurs in no other condition of the urine. Dr Beale says "This is the sugar fungus. But neither the character nor the occurrence of the fungus are sufficiently constant to enable us to accept implicitly Dr Hassall's conclusions as to its value as a test for the presence of sugar. The sugar fungus which grows in diabetic urine is identical with the yeast plant." From the above it would appear that both Drs Hassall and Beale believed these organisms developed only after the exposure of the urine to the atmosphere.

In the archaeological museum in Cambridge may be seen whole series of adult skulls from certain of the prehistoric races of South America with perfect teeth. The mouths so well furnished are also closed to our interrogatories of the why. The last generation of Americans living upon hot bread and fried meats might have been described as a teeth-aching race. Our native genius rising to the necessity of a felt want evolved a new profession earlier

¹See *American Medical Association Journal* August 1883—Germicides and Their Relative Values

¹N Y Medical Journal July 22 '86

*Kidney Diseases and Urinary Dep

called the dentist, now the dental and oral surgeon, and the present generation may be styled a teeth-preserving and teeth-manufacturing people. An army of ten thousand trained specialists are busily engaged at an estimated annual cost, in the United States alone, of from forty to fifty millions of dollars. In the highest consideration this is a very imperfect compensation for the damage done these comparatively minor members of the body by the ever present micro-organisms which riot in this usually filthy cavity. An antiseptically clean mouth and our dentists would become rivals of the historic McCawber, and dyspepsia be placed at the bottom of the lists of diseases.

A blind man no matter how well armed and how active is a dangerous ally, his blows may fall equally upon friend and foe. How can one who is blind as to causation direct as to the prevention of disease?

The fundamental basis of all sanitary law, and I may also say of the treatment of disease, lies in the acquisition of such causative knowledge. The application of sanitary law to city life must demand an atmosphere reasonably free from the defilement of organic waste. This necessitates a system of sewerage which shall continue from the house in a steady unbroken current to its discharge at a safe distance from habitation. This current should be of sufficient rapidity to prevent sedimentation, and deliver the house products before time sufficient for putrefaction, even in summer, has elapsed. This can never happen in the systems now in use in those cities situated upon the sea shore, since here the sewers are practically tide-locked a large fraction of the day, and a cessation of current with sewerage deposit must ensue, while a backward pressure is necessarily produced upon the sewer air which, loaded with organic products, must escape into the house through any one of the water traps now in use.

Sewer-gas poisoning, which means air changed not so much in its chemical constituents as defiled by organic impurities, is thus by no means in our best constructed houses a hypothetical danger, here often the greater, for the costly luxuries of water-closets and basins are each a standing menace, and are to be regarded with suspicion. Boston which has and yet continues to drain into its back-bay and harbor its sewerage by more than fifty outlets, is upon the eve of inaugurating its new system at an expense of nearly \$5,000,000, by which the sewerage is to be pumped into a storage reservoir situated upon Moon Island and discharged into the out going tide, and thus protect the harbor from defilement by sewer drainage.

The wise political economist and world renowned historian, Mr. George Bancroft, in discussing the future of civilization, once said to me "I look upon New York city as the future commercial metropolis of the world, a great center of ten or fifteen millions of inhabitants." This prophecy of years ago has gone on towards a steady fulfillment, until, like London, she exacts tribute from the entire world. Situated upon a narrow neck of land between a mighty river and a deep bay, it would seem that good soil-drainage would be most easily secured, and yet her

sanitary authorities state that the imperfect, incomplete, and broken sewers have caused the soil of whole districts to become so charged with sewage that the saturation point is reached. Nearly four millions of people pour their waste into the river and harbor, as is most convenient, while miles of her shores are fringed with wooden wharves built upon piles, not alone themselves undergoing decay, but a fertile source of detention of putrefying material. The New York physician will tell you that, no matter what disease he has under treatment, it is with the added factor of malaria from such defilement. Rich and poor must alike suffer from such danger, and if the prophecy of America's distinguished scholar is to be fulfilled, New York must take her sewage out of the harbor, and rival Liverpool with docks of solid granite for the merchandize of the globe.

The water supply must ever be pure and ample. The extraordinary expenditure necessitated by most cities has made water a costly product. Rivers and lakes in sufficient proximity for such use are liable to defilement from suburban towns and manufactories, and only by the greatest vigilance can pollution be prevented. Boston has freely expended her millions upon a water supply confessedly inadequate in amount, and of a character which is a constantly recurring source of complaint and danger. Much of her water supply is retained in artificial shallow storage basins, from which the surface soil was never removed, and whose water-shed comprises a very considerable population, and Natick, with its 8,000 people, still drains its waste into Lake Cochituate, the original source selected for the city supply.

The Board of Health returns for Boston, August, 1883, out of a total of 521, gives from zymotic diseases alone 194 deaths, while 135 cases of typhoid fever were reported.

For September, a total mortality of 765, there were 253 deaths from zymotic diseases, and 215 cases of typhoid fever reported.

With astonished gaze the traveler views the great arches spanning and crossing the Campagna, which once bore to old Rome the pure waters of the distant Alban mountains. The last generation of scant population, with singular energy and foresight, at the behest of commerce, wedded by a water way, more than three hundred miles in length, the great lakes with the Hudson river. The twentieth century will exhibit yet greater marvels for the securing of pure water. The project is already under discussion to supply the great metropolis from no nearer source than Lake George, with the thought of protecting its water-shed from further pollution, and carrying its pure, sparkling water to the thirsty city at an estimated expense of no less than two hundred millions of dollars.

The danger from the dead must not be forgotten. As we invite our friends to sympathize in our sorrow let it not be to their peril. Revive, if need be, the custom of Egyptian preservation or re-inaugurate the use of the Roman funeral urn, but do not sow the seeds of an epidemic of the ever prevalent contagious diseases by our present display of decomposing remains, adorned as if for a reception. Let the

genius of some sanitarian devise a casket, at once hermetically sealed, rather than do violence to time-honored custom or shock the deepest and most sacred feeling of broken hearts by urging cremation. The public health act of Great Britain makes the holding of a "wake" over the body of one dying from contagious diseases subject to a fine of five pounds. Let American authorities equally protect from similar dangers.

We turn reluctantly from the consideration of questions having so great and vital an interest to the medical profession, and of primary importance to the entire animal kingdom. If Rip Van Winkle experiences be granted to us in the twentieth century, with little aid of the prophetic power we may forecast some of the advances then made known to us of our science. In the light of past history, with its fashions and foibles of the *medicamenta*, few would presume upon the mission of its pellets and powders.

Surgery and sanitary science are, however, based upon entirely different factors of our knowledge and must remain the great corner-stones of a divine art, as wide-reaching as humanity. Upon these shall be builded the grand *Æsculapian* temple of the future, where will be taught a science foreshadowed in the deeds of the great Galilean Master.

The citizen must not be lost in the physician. A Republican Government demands service of all. As I turned from the motley crowd in Castle Garden I shuddered at the thought that these men were so soon to be my peers in our government, but the bright-eyed children, hiding in the scanty skirt of the mother, looked hopefully up, as if to say, "Welcome us in our escape from the oppression and over-crowding of the centuries." Then came the vision of our broad domain scattered all over with school-houses, academies and colleges. Rosy-hued with health, in youthful vigor, our women in tens of thousands have devoted their best years to the training of the young. Four hundred American colleges and universities with open doors invite to a higher education. Universal knowledge is the Republic's only safety, and further needs have only to be made known to be liberally met by the generosity of the American people. The necessity for research and pure science are recognized as never before, and may the day soon come when our youth will no longer require for their best development and higher education, European training.

Be it our bounden duty as physicians to disseminate to the masses proper instruction in the cardinal virtues of right living, and to demand from our government wise sanitary laws, both State and national, in the enforcement of which every house shall be builded and maintained as sanitariously safe as architecturally, rich and poor alike abundantly supplied with pure air and water and have their habitation upon an uncontaminated soil."

NAPHTHOL--ITS MEDICINAL USE AND VALUE

BY JOHN V. SHOEMAKER, A. M., M. D., PHYSICIAN TO THE PHILADELPHIA HOSPITAL FOR SKIN DISEASES, LECTURER AND INSTRUCTOR ON DISEASES OF THE SKIN IN THE SUMMER SCHOOL AND POST-GRADUATE COURSE OF JEFFERSON MEDICAL COLLEGE

Read before the Philadelphia County Medical Society, Wednesday evening October 17, 1883.]

Naphthol is one of the remedies of recent introduction, and of the two products of that name the B naphthol is the one which was first used by Prof. Kaposi as a substitute for the tar preparations in skin diseases. It was thought by him as the essential and curative ingredient of tar while it was free from any objectionable features of the latter.

My attention was directed to this remedial agent by Dr. Justus Wolff, a chemist largely interested in the manufacture of coal tar products, who kindly furnished me a paper on the chemistry of this substance along with some novel properties which he had observed in it. As this paper, however, is too long for reproduction here in its entirety and besides is largely of chemical interest only, I will here give it briefly in abstract, as far as it will be necessary to acquaint us with the chemical character of its subject, as follows. Naphthol is a derivative of naphthaline, a hydrocarbon found in large quantities in coal-tar, belonging to the so called aromatic group. In the fractional distillation of coal-tar various hydrocarbons are obtained at different degrees of heat. Thus at 80° C, Benzol distils over, between 80 and 110° C Benzol and Toluol mixed, at 111° C, Toluol alone, from 111 to 136 Toluol and the different xylens mixed, from 136° C to 142° C Xylens only, then the Cumenes, Phenol and Cresols and at 218° C Naphthaline which sublimes in colorless, transparent, brilliant crystalline plates possessed of a disagreeable pungent odor, the empyric formula of which is $C_{10}H_8$.

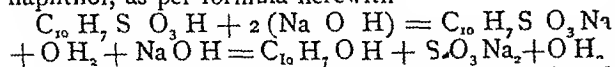
Naphthol is produced from this by a substitution of one of the hydrogens in naphthaline by one molecule of hydroxyl = O H.

According to the different positions of the hydrogen substituted in the naphthaline by the hydroxyl two different naphthols are obtained of which one is called α naphthol and the other the one we shall alone speak of hereafter is the B naphthol of the formula $C_{10}H_7O$.

The naphthols demonstrate the advantage of a knowledge of the relative and positive positions of substitution in order to understand the cause and constitution of the different offsprings from single or compound constitutions.

The method of producing naphthol is like the general process employed in effecting hydroxyl substitutions by first producing monosulphs, substitutions by means of strong sulphuric acid at certain temperatures and melting the monosulphonated compound with sodium hydrate, the ordinary dry caustic soda. In the case of naphthaline treated thus with sulphuric acid the naphthalen-monosulphonic acid is produced

according to the following formula $C_{10}H_8 + S O_2$, $H_2 \cdot 2C_{10}H_7 \cdot S O_3 H + H_2 O$ Which on being melted with sodium hydrate yields naphthaline hydroxyl or naphthol, as per formula herewith



According to the different temperature employed in the sulphonation of the naphthaline, either α or B naphthol are derived by the last process. The naphthols thus produced are usually purified by distillation and brought in the market as crystalline masses of a reddish color and a disagreeable and pungent odor, as shown in the specimen herewith submitted.

The naphthol B crystallizes in scale-like clinorhomboidic laminae from watery solutions, whilst in a molten state it represents clinorhomboidic prisms. It dissolves in 520 parts of water at $60^\circ F$, and in 75 parts of boiling water. It is readily soluble in alcohol, ether and chloroform. An aqueous solution is colored yellow by chloride of lime and by heating this solution yellow flakes separate. It melts at $122^\circ C$ (Shaeffer) but a mixture of both α and B naphthol melts at a lower temperature than either alone. Compounds with alkaline metals or ammonia, and alkaline earths are not stable and separate easily either by evaporation or in contact with carbonic acid.

The naphthols stand in the same relation to naphthaline as phenol to benzol and cresols to toluol. If one of the six hydrogens in benzol is substituted by hydroxyl, phenol is obtained, in the same way are cresols and naphthols formed. By this analogy of constitution of naphthols, phenol and cresols, the inference may easily be arrived at that they may prove alike in their disinfectant character as well, and in order to prove this, I undertook a series of experiments. Of course, the commercial naphthol for that purpose was out of question, and I experimented, therefore, first to obtain a naphthol free from odor. As the crude article contains as contaminations sulphur and sulphurous acid, the sublimates thereof will yield, besides the naphthol crystals, also sulphuretted hydrogen, thionaphtholes, carbolic and cresylic acid, thiophenols, and the like, to which ordinary naphthol owes its pungent and disagreeable odor. I avoided this all by passing a rapid current of steam through its aqueous solution, expelling thus all volatile by-products, and obtained naphthol thus in its greatest state of purity, in beautiful silver crystalline scales, as here submitted. This naphthol may again be sublimed, and obtained then in elegant white crystals, as here shown, but by the heat employed, more or less decomposition again takes place, and renders the product somewhat disagreeable and pungent.

In order to test the disinfectant and antiseptic properties of my inodorous naphthol, I added one part thereof in powder form to 480 parts of urine, which, at the expiration of six months, at a varying summer temperature, manifests no odor or signs of decomposition, while another of the same urine, without addition of naphthol, had a strong, putrid odor already, after standing for three days only. To

this latter I added, after standing thus for eight days, some of my inodorous powdered naphthol in the above mentioned proportion, and in twenty-eight hours it had lost its putrid odor, and has kept thus up to the present writing, when no putrefaction or signs of it can be detected in either specimen. The same experiments I have made with meat immersed in a solution of naphthol in 520 parts of water, as well as in other experiments similarly conducted.

Experiments with the solutions of the compounds of naphthols with alkalis or alkaline earths, prove that these act very much less antiseptic than the solutions of pure naphthol soap containing 4-10 % of free naphthol, were found excellent and serviceable in removing odors of putrefaction or decomposition from hands or cloths. They are also very efficacious in destroying clothes or body lice, as naphthol is a very active parasiticide. If naphthol is evaporated by means of heat, the air in rooms contaminated in consequence of disease or otherwise, it will be found to be rapidly deodorized and rendered fresh and sweet without other odors, making it thus of the greatest value for sick rooms, hospital wards, dissecting rooms, etc.

As carbolic acid has many disadvantages, and is not the deodorant or antiseptic par excellence, the inodorous naphthol can certainly take its place in every respect. As naphthol has been described variously as poisonous and injurious to the animal economy, which by its composition and analogy was not apparent, I felt it my duty to experiment with it in regard to such, and commenced at once without hesitation by taking it internally. One part dissolved in 3,000 parts of water produced at first heartburn, a slight sensation in the right lumbar region, and some dizziness. Of that solution an equivalent amount was taken to represent a half grain.

These symptoms disappeared after continuing its use for some days, and while the urine showed, upon analysis, traces of naphthol and naphthol compounds, no albumen or blood could be detected therein.

The doses then were gradually increased to 4 grains per day for six days, and still no untoward symptoms were discovered, while the warmth in the stomach directly after taking was followed by increased appetite.

Dr Schofield, of Albany, reports to me that upon my solicitation he has used it largely, at first experimentally, in the Albany Hospital, but that there it has now become a staple article, and is used almost entirely to the exclusion of other disinfectants and antiseptics. They use it there for all kinds of disinfection in wards, sick rooms, for wounds, etc., and have abandoned carbolic acid in all but a few cases, and always with the greatest satisfaction and success. This for the paper of Dr Wolff.

His experience, as well as that of Koposi and others, led me, some eight or nine months ago, to employ it both in private and hospital practice, and the success attained with it soon led me to further experiments. I found it to fully sustain the claim that Koposi had made for it in scabies, psoriasis, and chromophytosis, as well as in some of the chronic forms of eczema, in which it not only allayed the

itching attendant thereto, but lessening the infiltration as well. In wounds and indolent ulcers I have found it a most useful detergent and deodorant, removing the fetor and establishing healthy action of the parts. Aqueous solutions containing half grain to the ounce I have used to great advantage as vaginal injections, especially in leucorrhœa and uterine carcinoma as well as in gonorrhœal affections both in male and female. In diphtheritic throat affections it made a most useful gargle, as well as to remove the fetor of catarrhal and other affections of the buccal cavity. Its greatest value, however, arose from its disinfectant action of the evacuation of fever patients and rooms containing them, while by its absence of odor it did not tend to produce inconvenience both to patient and attendants. Combined with powdered talcum or starch, or both, and dusted into the shoes or stockings of those affected with foetid exhalations of the feet it acts most satisfactorily, and its effect is equally as good in the same affection involving the hands, axillary and inguinal regions. Combined with other ointments in the proportion of from 1 to 10 grains to the ounce, it not alone preserves the unguent from decomposition, but exercises also an antiseptic action to the parts and the exudation therefrom. A slight admixture to an experimental sample of lard has preserved the same in excellent condition throughout the hot summer months. In chronic psoriasis, particularly when there is great infiltration a 5 to 15 per cent ointment has frequently been attended with good results. It has also been very effective in squamous and fissured eczema, used combined with lard or gelatin.

To test for myself its antiseptic properties in comparison to that of carbolic acid, I mixed two whites of an egg with equal weight of water, and took one-half of this mixture in one vial, adding one grain of crystallized carbolic acid, while to the other half in another vial I added one grain of Dr Wolff's odorless naphthol. After the expiration of five days the carbolized albumen assumed a putrid odor, whereas the naphtholized part, though discolored by the naphthol, remains to this day, twenty days after the experiment, without odor. A quantity (about half a pound) of meat already commencing to putrify was also at the same date immersed in a saturated aqueous solution of naphthol, with the effect of arresting the putrefaction and preserving it for some time.

After using naphthol so long and successfully without any untoward occurrences, I fear to my astonishment and alarm that Dr A. Neisser in the *Central blatt für die Medizinischen Wissenschaften* 1881, No 30, reported most extraordinary toxic effects obtained with naphthol and that also Kaposi reported having seen hæmaturia, ischuria, vomiting, unconsciousness and eclamptic attack attacks in a boy after the external application of naphthol. Also that Squire reports in the *British Medical Journal*, January 14, 1882, of it producing blisters and irritating the skin.

Dr Piffard regards it as a dangerous remedy, and Prof. Rapon while he reports good results with it (*British Medical Journal*, p 750) in scabies prurigo, and eczema advises in prolonged cases simple oint-

ment to be substituted every fourth week to avoid any possible risk of absorption.

Dr Neisser stated that one gramme of a saturated solution (which in water would contain about 1-30 grain of naphthol) injected hypodermically in a dog produced hæmoglobinuria and shortly afterwards death. To verify these accounts and satisfy myself on the toxic effect of pure naphthol if any it possessed, I administered to one rabbit repeatedly in 24 hours 34 minims of a saturated aqueous solution hypodermatically without any result either as to inconvenience to the animal, increase of his temperature, diminution of his appetite, or causing lethal effect. This method of treatment was pursued for five days, not less than four to five injections being made per day, and the result was still the same. Determined to obtain toxic effects with it and if possible to demonstrate its toxic action by a post mortem examination, another rabbit was fed at first every three hours with one grain pills of naphthol and subsequently with two and four grain pills at the same interval, but beyond increasing the appetite of the animal no special effects were apparent. In consideration of this, one of my assistants, Dr Charles S. Means, and my student, Mr F. C. Waterman, volunteered to take naphthol themselves internally, to test, if possible, its action upon the human organization. They commenced with one-quarter of a grain dose every two hours, their pulse, temperature and urine being subjected to the closest inspection both before and after. The second day they took half grain every two hours, the third one grain every three hours, the same on the fourth, while on the fifth and sixth they took two grains every three hours, and on the seventh five grains twice daily. The pulse and temperature did not appear to be affected by this, nor was at any time albumen or blood apparent in the urine. Though they experienced great warmth in the epigastric region after each dose, that passed away in a short time, but left them with slight vertigo, buzzing of the ears with all evidence of cerebral hyperæmia. The alvine evacuations were softened and of mushy consistency, changed to a clay color, and in one of the cases increased to diarrhœa.

Arriving at a resume of my experiments I must certainly proclaim the odorless naphthol which I had received from Dr Wolf as not a toxic agent, and while I have found it a most useful remedial substance and a disinfectant and antiseptic of the greatest value, it does not in my experience confirm the dangerous influence exercised on the human organism as reported by the gentlemen above quoted, a fact for which I can only account by the greater purity of the material used by me, purified from the deleterious contaminations above enumerated by the process already described, which is not employed abroad, where yet naphthol is sold and used as reddish crystalline masses, with strong, pungent and disagreeable odor. That it is far superior to carbolic acid and other disinfectants and antiseptics I have no doubt, and I am informed that in price it is not alone cheaper than the former but by its greater efficacy and smaller amount necessary it is a certain and valuable addition.

being almost absolutely odorless. It must be borne in mind that all my remarks apply to odorless naphthol, only such as I have exhibited and that I consider that alone as safe for medicinal use.

NERVE-STRETCHING.

[A paper read in the meeting of the Tri State Medical Society, September, 1883, by H. G. B. Wright, M.D., in behalf of Drs. Johnson and Wright, Olney, Ill.]

In the fall of 1882 we performed our first operation of nerve-stretching. The result was such a phenomenal success, that we became much interested in the operation as a therapeutic process. In order to determine the frequency and results of the operation within the limits of the Tri-State Medical Society, we mailed about two hundred circulars to physicians and surgeons practicing in Indiana, Illinois and Kentucky, a few of them went to Cincinnati, St. Louis, and Philadelphia.

The blanks were printed in such form as to enable physicians to fill in the data asked for with a minimum amount of labor. Of those sent outside the geographical limits of our Society, none were returned. Only five of the circulars were returned, and they contained the data of only twenty-two cases operated on by eight physicians. So far as we know, only two of these cases have been published in the medical journals. Since these circulars were sent to the active men of the States mentioned, and elicited reports from only eight physicians, we infer the operation has not been resorted to by many physicians in this part of the United States.

Of these twenty-two cases, eight were traumatic tetanus, eight sciatica, two paralysis, one locomotor ataxia, one an obscure central nervous disease, one a case of dysaesthesia, and one pain following a crushing injury to left arm.

The operation was productive of good in only two of the eight cases of tetanus, one of these recovering, the other receiving decided benefit, but dying several days after the operation, apparently of paralysis of the heart. The cause of the tetanus in the case that recovered was a nail wound of the head, and the median, ulnar and internal cutaneous nerves were stretched four days after the receipt of the injury. In each of the eight cases of tetanus, the nerve or nerves of the affected limb were the ones subjected to the operation, and the cases were all acute, the longest time that had elapsed between the receipt of the injury and the date of the operation being four days, and the shortest seven hours, the average being about two days.

One of the two cases of partial paralysis was a sequel of spinal meningitis, and the operation was purely experimental, and received as such by the patient. The result of the operation in this case is put down as a slight improvement, the other was a case of paraplegia, with cramps in both legs so violent that the patient could not rest. The cramp was relieved in all the muscles except those supplied by the obturator. The patient still has great pain in his back during cold, rainy weather. Dr. Roswell Park, of Buffalo, N. Y., sent us the data of a case of dysaesthesia which had existed for fourteen years, in

which he stretched the right sciatic nerve on the 21st of June, and the anterior crural on the 29th, without obtaining any beneficial results.

The case of locomotor ataxia was operated on by Dr. Fenger, of Chicago. It was of two years' standing prior to the operation. The pains were relieved, but the procedure was productive of no more positive good, and the patient died six weeks after.

The cases reported under the head of sciatica constitute a very interesting group because of the large per centum of cures. Those of adult years, those in the responsible period of life, are the persons upon whom sciatica so often fixes itself with painful tenacity, resisting through years the wisest and most considerate treatment. Any harmless procedure that will cure three out of five, or even one in five of such cases, certainly merits our consideration. Two of these eight cases of sciatica are reported as being due to pelvic cancer. The pains were lessened in one, and cured in the other, both patients dying, a few months after, from the effect of the cancer. One of the remaining six cases was relieved for thirteen days, after which there was a gradual return to the condition existing before the operation. This leaves five of the eight cases cured permanently by the operation of nerve stretching, after all other remedies had signally failed. Dr. C. A. Palmer, of Princeton, Ill., operated on one of these—a woman—in 1876, who had been suffering from sciatica for four years. The Doctor writes: "Patient had previously tried every kind of treatment at the hand of every and anybody, but with not only no relief, but positively grew worse all the time. At the date of the operation, on account of suffering, loss of sleep, loss of appetite, etc., she was almost a complete wreck." The operation produced a complete and permanent cure. Dr. Roswell Park, of Buffalo, N. Y., operated in June of this year on a man 26 years old who had had sciatica for five months and had been well treated by the drugs without relief. The nerve-stretching cured him at once, with no return, to date of report.

The case on which we operated was a laborer, of fine physique and previous good health, 45 years old. He was taken in the fall of 1874. During the following winter he could walk but little, but could sit in a chair without much pain. During the first fifteen months he was treated by intelligent physicians of Olney. At the hands of one of these he received sulphate of morphia hypodermically along the course of the nerve for forty consecutive days.

During the winter of 1876-'77, he was treated by intelligent physicians in Decatur, Illinois. In the spring of 1879 he went to St. Louis, and was there treated by means of chemical electricity. Insulated needles were thrust deeply into the thigh along the nerve, and these connected with the battery. He was never treated by quacks. He made a manly effort to regain his health by applying himself to the remedies directed for him by his physicians, but such means were productive of nothing more than temporary benefit, and often were labor lost.

When he came into our professional care, he was unable to walk except on crutches, and his pains were always made worse by efforts at locomotion. His

pain commenced at an uncertain point in the right hip, and extended along the lateral and posterior aspect of the limb to the dorsum of the corresponding foot. His suffering was often intense, at other times a mere feeling of formication, hygienic surroundings not good, skin clear and pale, tongue furred, appetite capricious, and he had constipation, alternating with diarrhoea. His sleep was much broken. We gave him citrate of iron in sherry wine, cascara sagrada, sulphate of morphia, iodide of potassium, strychnine, arsenic, etc. At our hands he received a large number of injections along the course of the affected nerve of from 20 to 60 minims of chloroform. From these he received decided relief, but it was evanescent. We also gave him deep injections of sulphuric ether, but with less benefit.

In November, 1881, we applied the white-hot iron over the course of the nerve, each application remaining long enough to destroy the skin, and the spots were immediately painted with strong carbolic acid. This process was again repeated in January, 1882, and again in March.

Each application was productive of good, after the third a complete cure was thought to have been effected. During April and May, 1882, he moved about without pain, but close confinement to the damp, ill ventilated chamber of his sick wife and daughter impaired his general health, and he began to have pain along the course of the left sciatic nerve. He could map out the true course of this nerve through the guidance of his pain with as much accuracy as an accomplished anatomist. In June, of 1882, we applied the actual cautery to this limb but it did no good. In July we used flying blisters with no better results. In October, 1882, we anesthetized our patient the fifth time and cut down upon the nerve just below its usual point of bifurcation in the lower third of the thigh. Having lifted it out of its bed in finding nothing abnormal about it we stretched it by pulling it from above downward and from below upward.

The force exerted was very considerable. The wound was dressed with carbolized oil. Active inflammation soon followed, and his temperature ran quite high. There was alarming constitutional disturbance attended by the formation of pus in different parts of the thigh and calf which burrowed extensively requiring several counter openings to secure its escape.

The inflammation was so great and involved so much of the limb that we were of the opinion it was due to other than the clean cut wound made to reach the nerve. From the moment of the operation to the present, eleven months, he has been absolutely free from sciatica. He has thrown away first one crutch then both of them and then his strong cane and now walks by the use of a slender stick, but he has a slight halt, due to the adhesive inflammation following the operation. For several months he has been earning good wages at manual labor.

After suffering eight and a half years and resorting with confiding and heroic perseverance to the treatment of good physicians he has nerve stretching to thank for his restoration.

The prominent facts worthy of special consideration, as shown by the data of these twenty-two cases, may be expressed in a few sentences.

1 The operation was productive of good in only two of the fourteen acute cases, while it was beneficial to a greater or less degree in seven of the eight chronic cases.

2 The nerves of the upper extremities were stretched in the acute cases and those of lower extremities in the chronic.

3 The procedure had no effect on the case of dysæsthesia of fourteen years standing, this being the only one of the chronic cases on which the operation was a complete failure, the result of the case of sciatica following spinal meningitis being set down as only a slight improvement.

4 The five chronic cases reported cured were sciatica.

5 No unpleasant results are reported as having followed the operation, except those in the case operated on by ourselves.

These facts are certainly reassuring and take away from the operation the phantom of danger that might cause many an anxious physician to withhold the knife and allow his patient to suffer through months, and even years, and it adds another justifiable resource to the many with which we have been fighting neuralgias, especially of the sciatic nerves.

REPORT ON LAWS REGULATING THE PRACTICE OF MEDICINE IN THE UNITED STATES AND CANADA

BY RICHARD J. DUNGLISON, M.D., AND HENRY O. MARCY, M.D.

[Report of a Committee read before the American Academy of Medicine at New York, October 10, 1883.]

The progress made in the legislative restriction of medical practice in the United States since your Committee was appointed, three years ago, to report upon the subject, has been both notable and salutary. At that time the propriety of establishing such laws was under active discussion, and weak enactments, temporizing in character and but partially effective in their action, were evoked from tardy and timorous legislators in several of the States of this country, as compromises between a sense of the necessity of doing something to protect the health of their constituents and a consciousness that the practitioners and supporters of quackery and of irregular methods of medical treatment were among the influential voters whose active opposition might jeopardize their reelection. It was also found to be impossible, in a few of the States, to establish regulations for the practice of medicine which would be shaped to the wishes, principles or prejudices of those members of the Legislatures who believed that they themselves were occasionally benefitted by prescriptions that were not wholly scientific in their character, or by remedies that had acquired their reputation by extensive advertising of their supposed efficacy. The legislation of the seems tending to greater and

equate provision for the regulation of medical practice. Several States which had hitherto but feeble legal enactments, or possibly none at all, have, since our last report, adopted measures that will probably be found to be effective in their working and conducive to the public welfare. The excellent laws now in force, in West Virginia and Illinois have been taken as models, and although it has been found impossible to imitate them exactly, on account of local obstacles and local prejudices, the wedge has been entered, and some good results must inevitably attend the enforcement of the law. A letter recently received from Dr Millard, the Secretary of the State Board of Minnesota, a State which has adopted restrictive enactments since the last annual report of your Committee, summarizes the general aspects of the best of these laws, and we may quote his remark upon their provisions as particularly appropriate in this connection, especially as he has given the subject of medical legislation close study and attention.

"I think," says Dr Millard "The law or 'Acts' now in force in West Virginia, Illinois, Minnesota and Missouri, the best, by far, extant in any of the States. These four States are governed by virtually the same law, and have a constituency of at least 15,000 physicians. Each act gives the Board the power of deciding the diplomas of what schools they shall recognize, and of revoking the certificate of any practitioner for unprofessional conduct, also the power to grant licenses to non-graduates by passing the necessary examination to test their fitness. You will observe that the main features of the law of these four States make the Board the censors of the different medical schools, as well as of the professional conduct of those practicing within the jurisdiction of the different Boards. It is claimed by the enemies of this act that it constitutes a 'medical autocracy' of the Board, and that it may use its power very unjustly. There is no doubt that, if the act is administered by unfair men, this criticism is true. It is, however, noticeable that outside of a few 'commercial' medical schools, the law gives the greatest satisfaction, and I have not heard a whisper of complaint. The profession in general and a few of our leading medical institutions recognize that this country is flooded with incompetent medical men. That the time has arrived to cry, halt! all will assert, but as to the means of bringing about the halt there is a great difference of opinion. That it will not be brought about by the colleges themselves the profession is satisfied after the last ten years' agitation of the subject, and the example set by Bellevue and some others. In appealing to legislatures to regulate this evil, I think the correct law should compel *all parties* to submit to an examination before practicing in the State. Such legislation is, however, impracticable now, and next to this I think the acts of the States I have mentioned the best."

Whatever the character of a legislative enactment may be, the benefits to flow from it will necessarily depend upon the manner in which it may be enforced. All the States may not be so fortunate as those of West Virginia and Illinois, in the possession of executive officers, in the possession of their secreta-

ries (Drs James E. Reeves and John H. Rauch), who are at once vigorous, keen, energetic and alive to the public interests involved in a faithful execution of their respective trusts. As stated in our previous report, West Virginia is, we believe, the only State which has a Board whose medical members are all of one professional faith. The medical profession in every State, however, recognizes the fact that these laws are designed, not for their own protection, but for the good to the community at large which flows from properly regulated medical practice. Indeed, as has recently been remarked in the editorial columns of a prominent medical serial,¹ "registration laws primarily intended for the protection of the profession, seem particularly liable to fall short of their intended objects, not so much because of defective construction, as of unfaithful interpretation, indeed, unless definite and comprehensive in expression, and fully sustained by public opinion, they may be made in practice to sanction and perpetuate the very evils they were intended to correct. It has been more than once asserted, by those fully qualified to judge, that in the neighboring State of New York the medical profession has really lost, by the Registration Act, more than it has gained. At the last meeting of the State Society of New York, it was mentioned as a fact, by one of the members, that an Indian medicine-man had driven into Rochester, in war-paint and feathers, though engaged in the peaceful art of selling patent medicine, and, having gone to the Prothonotary's office and paid the registration fee, he had obtained a certificate as a physician, with full authority to practice under the law. Much disappointment has been expressed by physicians in Pennsylvania, as well as in New York, at the operation of the Registration act, it being claimed that the practical result is that, instead of elevating the profession above irregulars and charlatans, it has degraded the regular practitioner to the level of any one who can register under the act, however unworthy he may be to be in the ranks of the medical profession. It seems more than absurd that a physician may commit a crime that will render him in the eyes of the law unworthy to exercise the franchise of a freeman at the polls, and yet no bar exist to his continuing in practice, and no means are provided to annul or deprive him of the diploma he has dishonored."

The Mississippi State law, which was adopted in 1882, is stated, by an earnest observer in that section of the country,² to be on a par with that of Illinois, in its efficiency and practical working, and is said to have accomplished already all that its most sanguine friends could have expected. To quote his own language, "all practitioners in the State, as far as I am aware, of every grade, have cheerfully complied with all its requirements." * * The pile doctors, down to the Indian doctor tramping around with his banjo and his calico gown, have given us a clear field. Their places are vacant, and their voice is heard no more in the land. Thus, already, in one season,

¹Philadelphia Medical Times, July 14 1883

²Dr. J. M. Taylor *Miss Valley Med Monthly*, Feb 1883

thousands of dollars have been saved to the people of the State, to say nothing of other benefits."

As we must necessarily refer frequently to the conspicuous labors of the Illinois State Board, in any report intended to illustrate the operation of State laws for the relief of the public from the operations of unlicensed or legally unrecognized practitioners of medicine, in its various departments, we must briefly allude, at this moment, to its numerous refusals to extend its privileges to unworthy applicants for its recognition, and at the same time, signify our appreciation of its efforts in a direction well worthy of our recognition as Fellows of the American Academy of Medicine, the attempt to secure a common Examining Board on preliminary education for all the medical schools of Chicago. To still further perfect its work, an effort was recently made in that State to secure the passage of a law which would rid the community of advertising and lecturing quacks.

A direct service to the medical profession throughout the country is being at this very moment executed by this Board, and especially by its very efficient and energetic Secretary, Dr John H. Rauch, in the publication of an elaborate pamphlet on "Medical Education and the Regulation of the Practice of Medicine in the United States and Canada," in which are embodied at length the details of all the laws now in force in the various States and Territories of the Union, and in the Provinces of the Dominion of Canada. Each is herein represented in its present attitude, up to the very latest possible date of practicable information, and in numerous instances the opinions of official authorities as to the efficiency of the law are appended. Not only is the present phase of medical legislation thus made apparent at a glance, but medical education is portrayed, in the brief analysis of the course of instruction, requirements, etc., of each medical school recognized by the Illinois State Board, including, of course, all the other colleges of the country which have a reputable standing through their chartered existence in each State. At the meeting of the Council of the American Academy of Medicine in Philadelphia, in October last, the importance of such a work was so seriously recognized, as an outcome of the slight efforts in this direction made by your committee in their annual reports, that the Secretary of the Academy was instructed to approach some of the leading publishing houses with the view of giving to the profession, as one of the labors of the Academy, a work that would embody all the laws regulating medical practice as they existed at that time. Fortunately, an enterprising public body, the State Board of Health of Illinois, and its enthusiastic and valued Secretary, have now done what the publishers could not regard as a safe commercial venture and the profession and public will doubtless be more liberally benefited by that more general mode of distribution. The good work thus executed by the Illinois Board will be the accepted authority for the profession on all points relative to medical education and practice in the United States.

It is not contemplated by your committee to enter into the details of the new laws enacted since the

presentation of their last annual report. It may be briefly stated that the following States and Territories are now in the possession of laws, of various degrees of force and effectiveness, regulating the practice of medicine: Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Illinois, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Texas, Vermont, Virginia and Wyoming. Canada has laws in operation in the provinces of Manitoba, New Brunswick, Nova Scotia, Ontario and Quebec. The States and Territories in which legislation has been established since the last annual report of this committee are Delaware, passed April 19, 1883, Michigan, which went into effect September 7, 1883, Minnesota, approved March 6, 1883, and Missouri, in effect from July, 1883. All of these recent enactments have elements to be commended, and if strictly enforced will undoubtedly command success in their execution. Of the States above mentioned in the general list, a few have weak and temporizing provisions. Pennsylvania still lags behind her sister States, her legislature is content, for the present, with having adopted a simple registration law, which may have, and doubtless has, already accomplished a certain amount of good, and this has been accepted as the only present attainable and possible substitute for the stringent and restrictive measures which the profession and public so urgently desire.

Of the peculiarities of construction or operation of some of the laws now in force much might be written in commendation or criticism, but the limits of this report render their recapitulation wholly impracticable. Sufficient is it to point out a few of these, in elucidation. In Alabama, for example, the diplomas of medical colleges confer no right to practice medicine in that State, the applicant must be actually examined by a board appointed for that purpose. In Arizona and Pennsylvania and in Washington Territory, the law is simply for purposes of registration, in Arkansas a bill providing that all practitioners should be graduates of reputable medical colleges failed, this year, to pass both houses of the Legislature, and county boards of medical examiners, appointed by county judges, who may not be competent to decide as to the professional qualifications of their appointees, still continue to give certificates to applicants for permission to practice medicine in that State. Connecticut's very brief law is mainly intended for the punishment of itinerants. In Kentucky the law is a dead letter except in a few counties, and in Texas and Nebraska it is weak and ineffective.

Our Associate Fellow, Dr Piffard, considers the New York law a good one, but that it has one important defect, in that a perjury in registering is only punishable as a misdemeanor, and not as a felony. Oregon has had a bill before the Legislature every year for ten years past, but it has not yet succeeded in attaining so desirable a consummation. In Tennessee, which has no law of this kind, the practice of medicine is -- he f -- all accord-

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ing to the authority of the Secretary of the State Board of Health, "Indians, Negroes, confidence men, and all that ilk, ply their trade, with no restrictions whatever. Any man who claims to be a doctor is one, hence druggists who do not know enough to make a living turn out as doctors in full practice before you know it. A farmer boy, too lazy to plow, reads an old work on practice, or 'Every Man His Own Doctor,' invests six dollars in drugs, and is a physician, and being a 'regular,' we all consult with him. Our legislators will not touch, and our doctors are too timid to press the subject, and so we languish in the old paths."

It may well be asked by us, as a committee watch ful of the progress of the times, whether, in States like this, which have imposed no restrictions upon the unlimited and unbridled practice of medicine, the experience of nearly four centuries has seen any marked change from the days of King Henry VIII to the present hour¹, for we read in the preamble of an Act, passed in England in the year 1511, looking to the regulation of the practice of physic and surgery, that its enactment was rendered necessary by the fact that "the science and cunning of physick and surgery is daily, within this realm, exercised by a great multitude of ignorant persons, of whom the great part have no manner of insight in the same, some also can read no letters in the book, so far forth that common artificers, as smiths, weavers, and women, boldly and accustomedly take upon them great cures and things of great difficulty, in which they * * * apply such medicine as be very noxious and nothing meet therefore, to the high displeasure of God, great infamy to the faculty, and the grievous hurt, damage, and destruction of many of the king's liege people."

Utah has shown her interest in medical legislation only by that provision of her penal code which punishes physicians who are drunk, and has been content with this measure of legislative protection of the people of that section of the country. A correspondent in Salt Lake City² writes that "the inference is, that during the little time he is sober he will not do much harm. As for the medical fraternity proper, I do not think any of them care for any law regulating medicine. I believe they are advocates of the doctrine of the 'survival of the fittest.'" Wisconsin might be placed in the list of those having a law to regulate the practice of medicine, but the title indicates that it is simply "An Act to prevent Quacks from Deceiving the People by assuming a Professional Title," and not really a law that may be classed in the same category as those mentioned previously. In a letter recently received from Dr. Rauch, Secretary of the Illinois State Board of Health, the following interesting remarks are made by him: "The following States may be said to have good laws, viz North Carolina, Alabama, West Virginia, Illinois, Missouri, Minnesota, New Mexico, Wyoming Territory, Mississippi, Louisiana, and Alabama requires all persons, both those holding

diplomas and those having none, to appear before the State or county boards. "North Carolina requires about the same, but the penalty for violation of the law is inadequate, and there is some complaint against it for that reason. "The Mississippi law is new, and can not be well judged yet. "After this year, graduates of all colleges not complying with the requirements of this Board will be examined by the Board before being admitted to practice."

Such are the main points of interest connected with the progress of legislation in this country, which your committee have deemed it advisable to report. The facts they stated, in as comprehensive and condensed a manner as they have thought possible in their efforts to illustrate the progress of legal restrictions upon the practice of medicine, warrant them in expressing the view that commendable progress is being effected in this direction, and to entertain the belief that bright anticipation may be indulged for the future establishment of a healthy public sentiment that will in time protect the people themselves from the evils of irregular practice which they have blindly tolerated for so long a series years.

MEDICAL PROGRESS

ON A PECULIAR DISEASE OF HOT CLIMATES — *Psilosis Linguae—Psilosis Mucosae Intestini*. Under this heading Dr. George Thin (*Practitioner*, September) describes a disease, to which the local name of "Sprew" is given, which name is likely to mislead. Webster defines sprew as equivalent to thrush. Dr. Thin proposes the term *psilosis* as expressive of a constant feature of the complaint, the bareness or rawness of the mucous membrane. The disease prevails among the foreign residents in many of the Chinese ports, and the patient carries it home with him, or, being quite well during the course of the summer months, experience a recurrence of the disease when the weather becomes suddenly damp and cold.

Its onset is marked by a morning diarrhoea of stools that consist of a watery, thin, straw-colored fluid, which causes slight debility, that passes off as the day wears on. This may continue for months, or one or two years, without producing marked change. If the patient is delicate, after a few months a marked decrease of strength is observed, and he may become very ill. If he is naturally strong, it may last even so long as a year without any marked diminution of strength, but invariably sooner or later, if the disease continues, a condition of great debility ensues. In what may be termed the second stage of the disease dyspeptic symptoms appear, soreness of the mouth, pain in the stomach after food, painful, flatulent distention, and sometimes soreness in the rectum. At the same time there is more or less nausea, loss of appetite, and prostration. In the third, what may be called the fatal stage, which may last for a considerable time, the symptoms of marasmus are marked. During the whole course of the disease the tongue

¹ W. T. Bly, Early English Medical and Surgical Legislation, *New York Medical Record*, September 1st 1883.
² Dr. H. J. Richards, Report of Illinois State Board

is more or less affected, showing an unusual sensitiveness to hot fluids or acid substances, soreness over the whole mucous membrane of the mouth, localized pain in one or two points of the tongue. During exacerbations the tongue is seen to be redder than usual, and raw looking. More advanced, it may be smooth and polished, or rough and cracked, at times covered with aphthous deposits.

Of the pathology, little is known. It evidently consists in a defect of the formative power of the epithelium of the mucous membrane of the tongue and intestine—sometimes of one, sometimes of the other, for in some cases the prominent symptoms are intestinal, and sometimes of both. It occurs only in persons who have been in malarial countries, but it is not certain that it is due to malaria. In the treatment, diet is all important, an avoidance of vegetables, and hard, indigestible food of all kinds. Milk diet has succeeded best with Dr. Thin. Astringents and opiates are useless—produce a secretion of bile through the use of rhubarb and epsom salts, and give small quantities of quinine and bitters. The local treatment of the tongue was not satisfactory. Caustic solutions were of no avail. Boracic acid and glycerine seemed to relieve somewhat. Dr. Thin forbade the use of tobacco and alcoholic liquors, but in two patients who recovered, the use of a little alcohol in a very diluted form seemed to be beneficial.

ON THE SUBSTITUTION OF THE HYPOGASTRIC SECTION FOR THE DIFFERENT METHODS OF PERINEAL SECTION AS THE GENERAL METHOD IN CYSTOTOMY.—Prof. Villeneuve, M.D., discusses this question at length in an article in the *Revue de Chirurgie*, Sept. 10, and comes to the following conclusions:

1st The hypogastric section, which, up to the present time, has only been employed as an exceptional method, seems destined to become the general, but not exclusive, method of cystotomy.

2nd It should be practiced with the aid of the most recent perfected improvements applied to operative manipulation, as ballooning of the rectum (this is an awkward word, and as we have adopted such terms as ballottement, why not say ballonnement to express the dilatation of cavities through the distension of rubber balloons—or what is similar to them, in other words, the use of the colpeurynter), vesical injections, draining of the peritoneal cul de sac by syphon-tubes, and antiseptic precautions and dressings.

3rd The suture of the bladder must at present be discarded. But it remains as an ideal to be followed up, and if it can be accomplished, it would at once, by immediate union, place the superiority of the hypogastric section beyond all question.

4th The hypogastric section remains as formerly, a necessary method in cases of very large stones, of intolerant bladder, and of impermeable or constricted urethra or vagina.

5th It is presumable that it will become the method by preference in old persons, and in adult men in certain cases where lithotomy is not practicable, and which have up to the present time been treated by the different perineal methods.

6th In male children, it will probably be found at least to be equal in success to the perineal section. But the latter has been so successful for such a length of time as to make this of comparatively little importance.

7th In little girls, and the young girl at puberty, the hypogastric section should be the one selected.

8th In women who are no longer virgins, the question of a choice between the hypogastric section and the vaginal section remains a mooted question, and requires further investigation.

9th An inflammatory affection of the uterus, a notable deformation of the bladder through uterine trouble, and especially cystocele, should influence the selection of the hypogastric section.

10th The hypogastric section in adult females should be preceded by dilatation of the urethra.

11th Constitutional affections and diatheses do not constitute any special indications for a choice in the operation, and the same may be said as regards the wounding of this or that branch of the sympathetic plexus.

THE JUBILEE OF DR. FRIEDRICH HERRMANN.—The *St. Petersburg Medicinische Wochenschrift*, in its issue of Sept. 10 (22), devotes its first page and a part of its contents to congratulations to, and a sketch of, Dr. Friedrich Herrmann, who, it says, "yesterday 50 years ago entered the service of the Obukow Hospital as a supernumerary, yesterday his congratulators assembled for his jubilee, that he had for so long led an honorable career, and that, after so long a service, he was still able to perform his duties with undiminished power. Fifty years of faithful service and severe, self-sacrificing work in the same place—in these few words lie much. A man who can be so spoken of must be a man indeed, and his name can only be spoken with honor and respect. We hasten to attend the jubilee of the highly honored and highly deserving veteran, carrying with us also our sincere and respectful wishes for his happiness, and would wish that there were yet many among us who were capable of persevering at their posts of difficulty and of doing as Herrmann persevered and what Herrmann has done."

In the sketch of Dr. Herrmann which follows, it appears that he was born at St. Petersburg, March 22, 1811, of German parentage, and after becoming an apothecary, he graduated as a physician in the Medico-Chirurgical Academy, June 24, 1833. On Sept. 9, 1833, he entered the Obukow Hospital as a supernumerary, becoming Physician-in-chief in 1862. Besides his position in the hospital, he has received recognition from his Government in the shape of various orders, crosses and titles. He published his studies of epidemic cerebro spinal meningitis in this journal (*St. Pet. Med. Wochenschr.*, Vol. X) and has written upon remittent fever, the abuse of spirituous liquors, and the diagnosis of anthrax intestinalis.

TRICHINA IN GERMANY.—We find in the *Gazette Hebdomadaire des Sciences Medicales de Montpellier*, Sept. 15, an article taken from the "Ter" on this subject, which shows that

prevalence of trichina in the north of Germany, and it questions the right of Germany to accuse America of furnishing so much trichina pork, as the trichina pork of America has at least one advantage, that of rarely communicating the parasitic infection, as, by the process followed in preparing the pork in Chicago and Cincinnati, the trichinæ are killed, which is not the case in the pork considered eatable in the north of Germany, which, according to the custom of the country, is but imperfectly cooked. It would seem, from the recent discussions at the German Bundersrath, that the commissary of the imperial government could cite but three cases of trichinous infection resulting in Germany from the consumption of American pork, that of Rostock, 1871, Breme, 1872, and that of Dusseldorf, 1881, while he could cite by thousands the cases of infection caused during that period by indigenous trichinous pork, and nearly by hundreds the cases of death which that infection had caused.

The following from the official reports published by Dr Eulenberg gives the number of cases of trichinosis observed during six years in Prussia

Year	Carcasses Examined	Cases of Trichina
1876	1 728 515	800
1877	2 857 272	701
1878	2 524 105	1 222
1879	3 213 155	1 975
1880	3 342 303	2,284
1881	3,118 780	1,695

Making 8,677 cases of trichina out of a total 16,782,210, or one case in 1,934

To recognize these cases of trichina it required an army of inspectors with the microscope, which numbering 12,000 in 1876 increased to 18,581 in 1881. In spite of these precautions the number of published cases of trichinosis in the human subject has been quite considerable. There were in 1876 358 cases, 1877, 356, 1878, 488, 1879, 400 and over, 1880, 200, 1881, 238. That is to say 2,040 in six years, being 340 a year, out of which there were 84 cases of death, or 14 a year.

There follows in this article an account of the proportion of the American pork affected with trichina as shown on inspection in various localities in Germany, but as it is not presented in a very ready form for tabulation we omit it.

GENERAL GLANDULAR HYPERTROPHY—Prof Dr Castiaux (*Bulletin Medical du Nord*, July) reports a case of this kind occurring in a woman 58 years of age, of vigorous constitution and with no previous history which would throw any light on the cause of the disease. She entered the hospital suffering from glandular enlargements on the left side of the neck, which had for the past four months gradually become more pronounced and troublesome. On examination, the superficial and deep lymphatic glands on the left side of the neck were found to be enlarged and hardened, passing under the clavicle and into the corresponding axillary space. They varied in size from a walnut to a hen's-egg, pushing the larynx to the right and compressing the blood-vessels. On the right side of the neck above the clavicle were a few affected glands—none in the right axilla, nor

were any of the inguinal glands affected. The patient had an enormous embonpoint. This condition produced marked dyspnoea, alteration of voice and numbness of the left arm. Treatment generally by potassium iodide, locally by injections of iodine tincture, had no effect. The tumors increasing markedly in size and the symptoms becoming more exaggerated, an operation for the enucleation of these glands was performed without difficulty, but laying bare the internal jugular vein, it was followed by a marked amelioration of the symptoms. In nine days after the operation hæmorrhages set in, which became so serious and persistent that an attempt was made to ligate laterally the internal jugular vein. The attempt succeeded, but with great loss of blood, and was soon followed by death. The *post-mortem* showed an ulceration into the vein two and a half centimeters long. All the glands on the left side of the neck were enlarged, from the base of the cranium down, the whole of the arch of the aorta was compressed by glands. The left pneumogastric was compressed throughout its length, the right was free in the thorax, both was surrounded by a large glandular mass. The superior portion of the right bronchus was perforated by a gland which had destroyed its wall and projected into its cavity. The pericardium was double and adhered closely to the morbid mass of glands. One gland, of the size of a hen's-egg, had pressed through the outer envelope, projecting into its cavity, but covered by the serous layer. The left tracheal plexus and axillary vessels were surrounded by glands, the right were free. The posterior surface of the sternum showed large glands firmly attached. In the pleural cavities, particularly the left, along the intercostal spaces were little tumors adhered to the pleura. The lungs, on their surfaces, showed white-projecting nodosities adherent to the pleura. The vertebral glands were all affected, forming a chain which bifurcated and followed the iliac vessels to the crural rings where they were checked. The inferior vena cava was compressed. The mesenteric glands were also hypertrophied. The liver was very large, with little gray spaces on its surface, quite circular in form and in places easily enucleated by the handle of the scalpel, in others blending with the healthy liver tissue into which it sent small prolongations. The spleen was twice the normal size with firm tissue, containing little gray soft tumors of the size of a small pea. The bodies of the vertebrae throughout were of a spongy texture, infiltrated with a gray substance. The cervical glands were hard, the abdominal glands were soft. It is not necessary here to give the histological appearances, although they were very interesting. It was evident to the reporter that it was a case of lymphadenoma and that commencing at the neck it invaded successively the thorax and abdomen. That the same tissue as found in the glands, reproduced itself in the spleen, the liver, the pleura, and even in bone. One further point, which is not mentioned above, is of interest that in the operation for ligating the internal jugular vein, it remained open for nearly half an hour without the entrance of air, nothing opposed that entrance, but neither the veins nor right side of the heart contained the slightest trace of its presence.

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THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SPECIALTIES, AND THEIR ETHICAL RELATIONS—Twice, within a short time, has the editor of this journal been applied to for information (and many other times in years past) in regard to the questions, "*How far, and in what way, can those members of the profession who are desirous of pursuing a special practice, or, in other words, limiting their practice to certain diseases or the affections of certain organs, make known their position by cards or advertisements without violating the National Code of Ethics?*" The highly intelligent sources from which these inquiries have come, render it probable that only a small number in the profession know the answers that have been given at different times by direct action of the American Medical Association. It is well known that the National Code of Ethics contains no allusion to *specialties*, in the sense that the word is now used, but simply declares it to be "degradatory to the dignity of the profession to resort to public advertisements or private cards, or handbills, inviting the attention of individuals affected with particular diseases—publicly offering advice and medicine to the poor gratis, or promising radical cures, or to publish cases and operations in the daily prints, or suffer such publications to be made, etc., etc." It declares "These are the ordinary practices of empirics, and are highly reprehensible in a regular physician."

Admitting that these provisions plainly prohibited all classes of regular and honorable practitioners from advertising either in the public prints or by private cards in such a way as to call the attention of those laboring under particular diseases, the rapid

development of specialties soon led those following them to assume special titles not conferred by any educational institution, and not only put the same on their cards, but, in addition, to use such expressions as "special attention" given to this or that disease or class of diseases.

It was claimed by many of the specialists that the daily use of cards containing such titles as Ophthalmologist—Otologist—Gynecologist, and such expressions as "Special attention given to Diseases of the Eye and Ear," or to "Diseases of Women," etc., and the publication of such cards in strictly professional journals, or the sending of them in envelopes to members of the profession, was not "inviting the attention of individuals affected with particular diseases," and consequently not a violation of the Code. And individuals of this class managed to discuss the subject and urge these views, during some part of almost every annual meeting of the American Medical Association prior to 1868. At the meeting of that year, Dr E L Howard, of Baltimore, offered the following resolution:

"*Resolved*, That a committee of three be appointed, to report at the next annual meeting on the subject of specialties in medicine, and on the propriety of specialists advertising."

"After much debate, the previous question was called by Dr Bibbins, of New York, and sustained, and the resolution was adopted by a large majority. The President appointed as the committee, Drs E Lloyd Howard, Frank Donaldson, and Christopher Johnson, of Maryland." (See Transactions of Am Med Association, Vol 19, p 35.) At the next annual meeting, held in May, 1869, this committee made a report, which closed with the three first resolutions given below. The fourth resolution was moved as an addition by Dr L P Yandell, Jr, of Louisville:

"*Resolved*, That this Association recognizes specialties as proper and legitimate fields of practice."

"*Resolved*, That specialists shall be governed by the same rules of professional etiquette as have been laid down for general practitioners."

"*Resolved*, That it shall not be proper for specialists publicly to advertise themselves such, or to assume any title not specially granted by a regularly chartered college."

"*Resolved*, That private handbills addressed to members of the medical profession, or by cards in medical journals, calling the attention of professional brethren to themselves as specialists, be declared in violation of the Code of Ethics of the American Medical Association." (*Vide* Transactions, vol 11, p 28.)

These four resolutions were deliberately adopted by a vote of the Association, and have remained unchanged since.

They constitute no part of the constitution, by-laws, or code of ethics of the Association, but are to be regarded as indicating the views of that organization concerning the questions involved

Some of the restless ones were not satisfied, however, and at the annual meeting of the Association in 1873, a resolution was adopted requesting the members of the Judicial Council as a committee to inquire into the expediency of a general revision of the Code of Ethics, and report at the next annual meeting. In obedience to this request the Committee, consisting of members of the Judicial Council, gave the subject full consideration and reported at the meeting in 1874, and the report was unanimously adopted by vote of the Association. That part of the report relating to the subject now under consideration is in the following words¹

"The Code of Ethics very properly makes no mention of specialties or specialists, but presents plainly the rules necessary for the maintenance of professional character as applicable to all. But we are asked how, then, can those who wish to pursue a special practice make known their position to their brethren and the public? We answer that the title of Doctor of Medicine covers the whole field of practice, and whoever is entitled to that appellation has the right to occupy the *whole* or any part of the field, as he pleases. The acceptance of this honorable title is presumptive evidence to the community that the man accepting it is ready to attend practically to any and all duties which it implies. As all special practice is simply a self-imposed limitation of the duties implied in the general title of doctor, it should be indicated, not by special or qualifying titles, such as *oculist*, *gynecologist*, etc., nor by any positive setting forth of special qualifications, but by a simple, honest notice appended to the ordinary card of the general practitioner, saying, 'Practice limited to the diseases of the eye and ear,' or 'to diseases peculiar to women,' or 'to midwifery exclusively,' as the case may be. Such a simple notice of limitation, if truthfully made, would involve no other principle than the notice of the general practitioner that he limits his attention to professional business within certain hours of the day. Neither could it be regarded as a claim to special or superior qualifications. To give the specialist any privileges beyond this, would be to invest him with a special advantage inconsistent with the equality of rights and duties pertaining to the profession."

We are not aware that the Association has taken any action in relation to the Ethical Status of Specialists since the adoption of the report of which the above quotation is a part. Taken in connection with the resolutions previously quoted, each member of the profession can see plainly just how far, and in what way, he can make known, both to the public

and to his professional brethren, the fact that he desires to *limit* his practice to any particular part of the general domain of medicine and surgery

EXPLANATION The last three numbers of the JOURNAL have been printed on the day of their date. But owing to the amount and quality of ink necessarily used in giving the numerous illustrations in the interesting paper of Dr Keyt a fair impression, it was found necessary to delay folding the sheets a few days, and consequently made that number (the 15th) late in reaching its readers

DOMESTIC CORRESPONDENCE

PHILADELPHIA LETTER.

OPENING OF THE MEDICAL COLLEGES—OUR DISTINGUISHED VISITORS—THE PHILADELPHIA COUNTY MEDICAL SOCIETY

PHILADELPHIA, Pa., October 23, 1883

On October 1st, about noon, Prof Alfred Still delivered the general introductory lecture to the one hundred and eighteenth course of lectures in the Medical Department of the University of Pennsylvania. The speaker was warmly welcomed by a large gathering of eminent members of the profession, many alumni and students, who were amply rewarded by a most excellent address, in which Dr Stille dwelt to some extent upon higher medical education. In the evening of the same day probably the largest audience that has ever assembled in the arena of Jefferson Medical College Hospital greeted Prof Theophilus Parvin, who delivered the inaugural address at the opening of the fifty-ninth annual course of lectures of the college. Prof Parvin spoke in an able and scholarly manner on the "Genius of Medicine." At the conclusion of the address the class, through their chairman, John V Sheppey, presented Dr Parvin with a beautiful floral emblem, in which was set a pair of Wallace's forceps. Prof Parvin, in accepting the gift, which was symbolical of the good feelings of the class towards their new teacher, responded in his usual happy and appropriate vein.

The Medico-Chirurgical College began also on the first of October their third course of lectures, with an introductory by Dr Frank O Nagle. The Philadelphia Polyclinic and College for Graduates in Medicine began on the same day their fall sessions. The same corps of teachers, with the exception of Dr R J Levis, who has resigned, will continue to give instruction to physicians from October until July.

Sir William MacCormack, during his short stay in Philadelphia, was received and honored by our most prominent surgeons. The attentions that this distinguished surgeon received, although of a private nature, were as cordial as that which was tendered to England's Chief Justice, Lord Coleridge. This eminent jurist was especially honored by the trustees of

¹See Transactions of Am Med Association Vol 25 pp 30 31

the University of Pennsylvania, with a dinner in the University hall, at which were present not only our leading scientists and professional men, but likewise our most prominent citizens. The presiding officer, Prof. William Pepper, in presenting the distinguished guest, did so in such a masterly manner as to reflect the greatest credit upon the University and his profession.

At a conversational meeting of the Philadelphia County Medical Society held on Wednesday, October 17, Dr. Charles Herman Thomas reported "Three Cases of Downward Displacement of the Transverse Colon, including account of Autopsies." The cases showing the forms of displacement were illustrated by diagrams. Dr. Thomas stated that during the illness of the patients the conditions referred to were not in any instance recognized. After recounting the history of each case, the speaker added in conclusion that downward displacement of the transverse colon had been the immediate cause of death in them all, and that while the condition was rare, but few if any cases were recorded of this condition. Dr. Albert Smith, who was in consultation with Dr. Thomas in one of the cases, referred to the fact that they were unable to make out accurately a diagnosis, and thought that could such cases be recognized, the elevation of the hips might cause the colon by gravity to return to its proper place. Prof. Robert Bartholow said that downward displacement of the transverse colon should be divided into congenital and acquired. He had seen cases of both forms during his service in the Medical Department of the U. S. Army, and that the condition was not uncommon, especially the congenital displacement. Dr. O. H. Allen reported an interesting case of downward displacement occurring in his practice.

Dr. John V. Shoemaker followed with a paper on "Naphthol, Its Use and Value in Medicine." (See page 501.) Dr. A. Van Harlingen also referred to his experience with naphthol and its great value in scabies and other skin affections to which Dr. Shoemaker referred. Treatment of psoriasis was the subject of the next paper, which was read by Dr. Van Harlingen. The various remedies used internally were taken up in detail, and those preferred as the most effective after using diuretics, were to one class Fowler's solution, and to the other iron in some form. The speaker next discussed the various methods of removing the scales, after which naphthol, crysorrhin and pyrogalllic acid were each considered as means of treating the disease locally. He dwelt on the poisonous effect that might arise from the use of naphthol, and showed medical gelatine rolls which, while suitable for local use, were hardly applicable for want of the proper apparatus in private practice. In closing, Dr. Van Harlingen commended pyrogalllic acid as one of the very best remedies for local application to psoriasis. It was free from the irritating and many unpleasant effects of crysorrhin.

Dr. Shoemaker added, I think, that Dr. Van Harlingen has included in his interesting and instructive paper about all the remedies which are used in this disease. Believing that psoriasis is due to an accumulation in the blood of an excess of certain excre-

mentitious substances, a condition known as one of suboxidation, I always begin and continue the treatment with the object of overcoming this peculiar state of the system. I accomplish this purpose by using such remedies as will act effectively upon the liver and kidneys. I rely more upon removing the excrementitious substances from the blood by these organs, as well as by making the skin very active by various baths, than by giving arsenic and other preparations for their systemic effect. I do not believe in arsenic, or any other remedy, as a specific for psoriasis, and believe they only act at times by assisting to overcome this peculiar state of the blood. Napier, of Glasgow, extolled about a year ago crysorrhin, known formerly as crysophanic acid, given internally in one-half grain doses, as a remedy for psoriasis. Its action is that of a purgative pushed to toleration, and it will affect the blood and pale the skin of psoriasis patients, just as any other purgative would given under similar circumstances. In using arsenic, which I often do as an assistance to the treatment just referred to, I always prefer arsenic in the form of arsenious acid or sodium arsenite. The great objections to arsenic solutions, especially Fowler's, are their unstable state, and the improper manner in which they are often prepared. I therefore seldom use them, unless they are fresh and well prepared at the time of administration. If such solutions are kept any length of time they will undergo a change. I have not only made these observations, but have seen the same referred to in several medical journals by well-known authorities. I hold in my hand an extract taken from the *Journal de Pharmacie et Chimie*, in which M. Delahave refers to the fungoid formation in Fowler's solution. Here is another extract, taken from Lewin's *Accidental Effects of Drugs*, in which the author states that "it has been proved that Fowler's solution loses arsenious acid in the course of time, probably under the influence of organic substances which have gained access to it. The acid is reduced, and escapes as arseniuretted hydrogen gas. Great loss may be occasioned in this way." As to the manner of administering arsenic for the treatment of psoriasis, I always prefer, when I can, to give it by the hypodermic method. I generally use pellets of sodium arsenite, such as I exhibit divided in one sixteenth, one tenth, one-fourth and one-half grain doses, as manufactured by Dr. L. Wolff, of this city.

Prof. Bartholow in his recent work on Hypodermatic Medication speaks especially of the utility of this salt of arsenic subcutaneously, on account of it being a higher oxide than the potassium arsenite and therefore less an irritant. I usually select the inferior scapular or sacral region for the injection and repeat the operation every day until the eruption shows some signs of abating. In the meantime the constitutional and local treatment already referred to is continued. This method is precise, saves the alimentary canal and acts in a safer and quicker manner than all other means of administering arsenic for a systemic effect. I prefer it to the use of Fowler's solution. Dr. Van Harlingen has said of it that it is the only remedy for psoriasis except in the use of p.

regard pyrogallic acid as a dangerous remedy, having seen in several instances very unpleasant systemic effects follow its use. Beisner reported in 1880 four cases of poisoning from the external application of pyrogallic acid in which two of them terminated fatally. As to naphthol, no prevention whatever need be used in applying such as I have exhibited to you. I have used it all over the body without any untoward effect, both incorporated in lard and gelatine. You have seen me spread on this naphthol-gelatine dressing on the typical case of psoriasis I had before you this evening. The dressing is easily prepared, with an ordinary tin or china cup suspended in boiling water. The operator can add ten or thirty grains of naphthol to one-half ounce of gelatine with a little glycerine, stir in the cup now suspended in boiling water and as the heat liquifies, the mass can be easily spread over the patches. Plenty of hot water will in a few days remove this dressing that can be hastily and well applied in any physician's office or at any patient's home.

Dr Van Harlingen in response stated that he had referred to the use of diuretics in his paper and that the objection to the use of Fowler's solution could be overcome by having the preparation always freshly made. In reference to applying pyrogallic acid, he would of course only use the remedy in case the eruption was limited in extent. Naphthol had been regarded, in the form generally used, as at times giving rise to dangerous symptoms. We are, however, glad to see different results reported after the drug was freed from contaminations.

The last paper of the evening was by Dr James C. Wilson on Hydrargyrum Formidatum. He spoke of the extent to which this preparation was now used abroad in the treatment of syphilis, by the subcutaneous method. Liebreich, who had brought forward this new drug, claimed that after hypodermic injection it would undergo disintegration, the mercury be set free and so exert its action on the lesions of syphilis. Dr Wilson further referred to the preparation being easily soluble in water, having a neutral reaction, not coagulating albumen, and when injected beneath the skin was attended with little pain, no inflammation, or salivation.

Dr Shoemaker said: "This paper is of much interest to me, as I have been using for some years, with good result, the hypodermic method of treating syphilis with corrosive sublimate. I have, however, found that the corrosive sublimate in from 1-10 to 1/2 grain doses, increased or diminished in amount according to the requirement in each case, was sufficiently effective in managing the majority of stubborn cases of syphilis. If the hydermic syringe is in good order, as well as the needle, a gold one being preferable, and the operation is performed in a careful and skillful manner no abscesses or ill effects can or will follow the injections. I have treated many cases after this manner with the most happy effect and cannot see that the remedy presented possesses any advantages over corrosive sublimate." J v s

WASHINGTON, D C, October 25, 1883

At the first annual meeting of the Washington

Obstetrical and Gynecological Society, held October 19th, 1883, the following officers were elected for the ensuing year: President, Dr S C Busey, Vice Presidents, Drs W W Johnston and J Tabor Johnson, Recording Secretary, Dr C H A Kleinschmidt, Corresponding Secretary, Dr Samuel S Adams, Treasurer, Dr G L Magruder, Committee on Business, Drs D W Prentiss, C E Hagner, S S Adams, Committee on Admissions, Drs H D Fry, I E McArdle, J T Johnson, Committee on Publications, Drs T C Smith, C H A Kleinschmidt, T E McArdle, Committee on Pathological Specimens, Drs Johnston, Acker, and G B Harrison.

LETTER FROM A. B. TADLOCK, PRESIDENT TENNESSEE STATE MEDICAL SOCIETY.

KNOXVILLE, TENN., Oct 15, 1883

Mr Editor — THE JOURNAL of the 6th inst just received, late, it is true, in reaching its destination. But it is better late than never, not having lost any of its sweetness on the desert air, nor in the tardy U S mail bags. It is an interesting number in many respects, scientific and professional. The subject of medical contracts, opened up by Russy, and your able answer, certainly needs to be turned over and aired, in the prevailing professional degeneracy of the times. How about the government asking bids for annual medical services and medicines for an indefinite number of United States prisoners in a county jail? And suppose a few enterprising doctors, hankering after official honors, thoughtlessly sniff at the tempting morsel without, like Dr. R., comprehending where the wrong intrudes, which are most culpable, government clerks, medical enterprise, or journals and teachers? Ventilate, Doctor, ventilate.

And then brave "Ethicus" figures in facts worthy of notice. He arraigns the chief medical officer of the pension department of the government, Dr Hood, for "endorsing homœopaths as pension examiners." The "chief" or medical referee may be "a regular of the deepest dye," as "Ethicus" says he claims to be, nevertheless he is but a man—human, like the rest of us, and therefore, some of the instincts common to all mortals belong even to an official. In this way, while his acts as a physician are open to criticism, the man may be defensible, if not justifiable. I am the man's champion. The tenure of office under the present administration is held solely by virtue of unflinching loyalty to its behests, or by great proficiency in political gutter sniping. A gutter-snipe, conventionally, you know, is technically a commercial drummer. He gets his living by his trade, and so is the worthy prototype of the man who gets his office by working for other men's partisan or political interest. Both may make capital place-men without reference to either moral worth or worth ethical acts. But "Ethicus" unjustly chides the medical referee for "endorsing homœopaths." This he does not do. The Doctor only recognizes the medical certificates of examining boards (supposed to be physicians), appointees of the average Iom-and-Jerry congressman selected from the most active gut-

ter-snipes of the last campaign—selected without reference to any medical skill or qualification whatever, otherwise they would have been excluded as of a more worthy following. True, pension examiners receive their certificates of appointment from the Commissioner of Pensions, but the Commissioner now has no discretion in the matter, being the subsidized and humiliated servant of political bosses, known as Congressman, else the charger waits his official head. Here medical matters no longer belong to medical men, as they do in the army. Civil service reform even takes no interest in the medical wants of the Pension service. And the government, while looking to the medical department for medical and surgical fitness for army life and duties, now no longer cares for the qualification of medical men to do justice by her sick and maimed wards. It was for demagogical purposes that this most important matter has been denied medical men, and consigned to the quagmires of political "still-hunting." If the profession silently submits to this disgraceful divorcement without protest, let the first complaint come up from the outraged and mistreated pensioner and pension applicant. It is well known that the former Commissioner, Bennett, asserted the prerogatives of his office, and maintained its integrity by recognizing medical qualification in all of his appointments, thereby deserving great credit for his uncompromising stand in this respect. But times changed, and with them men and morals. Self respect, national pride, and professional honor now lurk enslaved in the poisoned evils of truckling government patronage, such as manhood should abhor as but lethal breeding beds of choleric vibriones and pus bacteria. But let us not upbraid too severely those who by nature value manhood thus subdued under partisan shackles more than the disenthralled manhood of a free American citizen, for the preference of you and me and Ethicus might be(?) slightly modified, if submitted to an analysis in the same kind of crucible. Let us be charitable. I defend the man, but confound his acts. In allowing the official to envy our freedom and independence, grant him pity for his tastes, credit for his enduring patience, and question not that it is all meant by him(?) to work out good for those who trust and are of long suffering. In this way clarity might not be misplaced, even at the door of the "endorsed homœopath. Let the profession purge herself of incompetency (endorsed, too, if you please). Then demand of the government the right to control medical matters in civil as well as in military affairs. This right obtained, the occupation and endorsement, with official prestige of charlatans, under any name, will figure less in the impending perils of the ballot-box, to the credit of the profession and the good of the nation and people.

OCTOBER 21, 1883

DEAR DR DAVIS

I am much pleased with your report on Prac Med, and notice your recipe for typhoid fever. For several years, I have used a prescription for typhoid fever somewhat as follows, and have been much

pleased with it. Almost all of my typhoid fever patients recover, though I have no hospital practice.

R Sugar, gum arabic, spts turpentine, aa 5i
Syr ipecac 5ii
Iodide sodium gr \
Cinnamon water, q s ft 5ii
ft sol

S Teaspoonful every 2 to 4 hours

Sponging with warm or cold water is grateful. Small doses t d of quinine in some cases, sub nit bismuth and salicine to check diarrhœa, about cover the drugs used.

Good soups, fresh fruit juices, as from baked apples, and their well-cooked pulp, and orange and lemon juices, and sometimes liquid lactopeptine t d after nourishment a teaspoonful. Fruit juices are too much neglected in fevers.

Change body linen every 24 or 48 hours, bed linen every 42 to 72 hours. Q C SMITH

AMERICAN PUBLIC HEALTH ASSOCIATION.

CONVENTION AT DETROIT, MICH, NOV 13, 1883

Undernoted please find list of railroads over which transportation can be obtained at reduced rates.

Be good enough to say by return mail whether you desire to use any of these roads in your journey to and from here, and the necessary certificates will be sent you at once, on presentation of which at the ticket offices transportation will be furnished at reduced rates. Passengers from any point on line of Louisville and Nashville railroad will not require certificates, but can purchase tickets to Detroit at starting point, and will be returned at one-third fare.

Flint & Pere Marquette railroad, half fare

Wabash, St Louis & Pacific, 1 1/3 fare round trip

Lake Shore & Michigan Southern, 1 1/3 fare round trip

Detroit & Cleveland Steam Navigation Co, half fare each way

Michigan Central & Canada Southern, 1 1/3 fare round trip

Detroit, Grand Haven & Milwaukee, 1 1/3 fare round trip

Detroit, Lansing & Northern, 1 1/3 fare round trip

Columbus & Hocking Valley, 1 1/3 fare round trip

Grand Trunk railway, 1 1/3 fare round trip

Great Western railway, 1 1/3 fare round trip

Louisville & Nashville, 1 1/3 fare round trip

Jeffersonville, Madison & Indianapolis, 1 1/3 fare round trip

W K MUIR,

Chairman Transportation Committee, Detroit, Mich

TRAINED NURSES FOR THE COUNTRY

EDITOR OF JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

Country towns and villages are destitute of nurses. It is the most difficult thing to obtain in a village.

usually stupid, ignorant, and devoid of every qualification which would make them useful in the sick room. It is difficult to conceive of a class of persons whose services in a community are better appreciated than a well-trained and efficient nurse.

It is not easy, and perhaps impossible, for physicians in rural districts to educate nurses, or at least to give them that kind of education which is required for a good nurse. We will have to look to training schools for them. Their services will be remunerated as well, and possibly better, than the district school teacher, while the position is not more exacting, nor the duties more arduous.

At the present time, it is evident that the country requires more nurses, and less doctors, more training schools for nurses, and less diploma-mills for grinding out doctors.

J F JENKINS, M D

TECUMSEH, MICH

FOETID AND SWEATING FEET.

RED OAK, IOWA, Oct 25, 1883

Dear Editor. — In the AMERICAN MEDICAL JOURNAL of October 13, p 428, among the "Medical Progress" articles, there is one for "Relief of Foetid Sweating Feet by Subnitrate of Bismuth," a remedy which I have never tried, but will inclose a formula that with the correct observat on of the instructions has been very certain of success in all the cases on which I know of its being tried.

R Aluminii et Ammo Exic, grs 2

Acidi Boracici " 2

Aquæ Simp or Rosæ " 35

Mix Sig Apply with soft sponge without rubbing, just as soon as the shoes and stockings are removed, while the feet are yet moist. This is quite necessary, as also the care not to rub.

Let this be repeated every two or three days, in the evening, and I have yet to know of its failure to check the profuse sweating or to lessen the foetid odor. Respectfully,

A M VAIL, M D

BOOK REVIEWS

THE DISEASES OF MEN.

(1) PRACTICAL CLINICAL LESSONS ON SYPHILIS AND THE GENITO-URINARY DISEASES By Fessenden N Otis, M D, Clinical Professor in the College of Physicians and Surgeons New York Surgeon to Charity Hospital, etc, New York. Bermingham & Co, 1883, pp 584

(2) SEXUAL IMPOTENCE IN THE MALE By Wm A Hammond, M D, Professor of the Diseases of the Mind and Nervous System, New York Post Graduate Medical School, etc New York. Bermingham & Co, 1883, pp 274

(1) Professor Otis' book is a volume of the recorded experience of a wide awake observer, super-added to and balanced by as candid a *resume* of our bulky venereal literature as has yet been published. The excellence of this work is due in no small degree to the clear-headed, and, if the term is permis-

sible, the *business-like* way in which the author attacks the vexatious problems in pathology, hygiene, and therapeutics constantly presented by the clinical aspects of syphilis and gonorrhœa. In its series of clinical lessons, as the chapters are modestly styled, this work really embraces a study of the genito-urinary diseases more exhaustive and analytic than any of the standard treatises. On the other hand, it is not so painfully and artificially "systematic" as to leave the impression that the author had been too ambitious to produce a great work, which should become authoritative and final. Often it appears that the outcome of such ambitious writing is a book wherein clinical facts are presented obscurely, wrongly colored, *theoretical*. Prof Otis shuns this fault. The subject of syphilis occupies the entire thirty chapters comprising Part I, or about one-half the book. Part II is a treatise on gonorrhœa and its *sequela*. It is an admirable exposition of the latest knowledge on the subject, containing a summary of the views and practices of various modern authorities, and the writer's own estimate of the relative importance of each.

It is particularly to be commended in the constant references which are made to a variety of different opinions, as in the case of the value of "specific" treatment in clap, that more is given the reader than a barren catalogue of opposing or differing practices from which to select. We have the satisfaction of finding, in connection with each subject discussed, a very careful analysis of all available information to determine the vital question, *which theory, which treatment deserves the most credit?* The work is more valuable as an authority than Sir Henry Thompson's, not merely because it is later, but because it is also fairer and more exhaustive.

(2) In dealing with delicate topics it is the habit of some writers to make an apology to the reader for the introduction of necessary but unsavory facts and records. With persons who have strong stomachs this is superfluous, but possibly all of us feel the subtle flattery conveyed in such an apology and prefer to be thus propitiated before any very nauseating recital of moral perversion or degradation.

We receive no such consideration at the hands of Prof Hammond in his work on Sexual Impotence in the Male. It ought not, perhaps, to be laid as a fault against a writer that his style is peculiarly sketchy and entertaining. Yet it may possibly be asked as a question of good taste whether a certain class of subjects should not be handled with more of reserve and soberness than we find in the pages of this book. The numerous cases cited throughout the work necessarily partake of the nature of tales, and although their history and treatment is carefully detailed, yet enough adventitious coloring is worked into the description of each case to make it highly entertaining reading to non-medical readers. This fact has been accidentally illustrated more than once in the brief time the book has lain upon the reviewer's table.

Aside from this question of good taste, the work is an extremely valuable one—covering a ground hitherto partially explored, and covering it satisfactorily and clearly. Those important factors in man-

agement, viz —hygienic measures and moral (meaning psychical) influences are ably and satisfactorily discussed. An extended experience has enabled the author to speak with comparative certainty of the value of a few drugs, prominently sodium bromide, in the class of cases requiring medication.

A notable omission from the list of causes of temporary and also of permanent impotence is found in the case of priapism, which is given only a passing allusion.

E W A

WHAT TO DO FIRST IN ACCIDENTS AND EMERGENCIES. A Manual Explaining the Treatment of Surgical and Other Injuries in the Absence of the Physician. By C W Dalles. Second Edition. P. Blakiston, Son & Co., Philadelphia.

This little book of one hundred and sixteen pages is well written and gives most excellent advice on the subjects treated. That a second edition has been demanded is good evidence that the work has proved useful. In its present form there are several new illustrations and much new matter.

The subject is treated of under the following main headings: Obstruction to Respiration, Foreign Bodies in the Eye, Nose and Ear, Fits or Seizures, Injuries to the Brain, Effects of Heat, Effects of Cold, Sprains, Dislocations, Fractures, Wounds, Railroad and Machinery Accidents, Hæmorrhage, Special Hæmorrhages, Transportation of Injured Persons, Poisons, Domestic Emergencies, Signs of Death, Supplies for Emergencies.

CONTAGIOUS DISEASES OF DOMESTICATED ANIMALS. INVESTIGATIONS BY DEPARTMENT OF AGRICULTURE. Washington Government Printing Office, 1883, 8vo, 271 Pp., Illustrated.

This work will interest the medical practitioner by showing how well veterinary medicine is keeping pace with the medical progress of the day, and how closely allied the studies of the causation of disease, especially in relation to the germ theory, have become with man and the lower animals. Dr D E Salmon, D V M, furnishes a very thorough and critical article on "Southern Cattle Fever and Fowl Cholera," followed by the interesting studies of Dr H J Detmen "Among the Cattle and Sheep of Texas," with the reports from other veterinary surgeons—Drs Hines, Miller and Rose—particularly on "Contagious Pleuro Pneumonia." Dr Ezra M Hunt discusses in a very practical paper "The Duty of the United States Government as to Contagious diseases," and Mr Edwin J Moffat, the London correspondent of the Department, gives interesting details regarding the "Foot and Mouth diseases of Great Britain." The text is well illustrated by some excellent micro photographs, reproduced by the litho-caustic method, of micrococci, schizophytes, diseased liver, kidney and spleen tissues, and the sheep parasite, the strongylus contortus.

Dr Salmon shows that the fever so prevalent, and fatal to all but young animals, in the Southern States, which affects cattle brought from the North, and supposed to be due to the influence of increased temperature upon imported cattle, is really the Texas fever

and infectious, the native cattle, when taken beyond the infected districts, carrying that infection with them. He also shows that the infection of Texas fever is spreading over new territory, and that snow and ice are not the barriers they have heretofore been considered. He has succeeded in tracing the line which separates the infected from the uninfected parts of Virginia for many miles, and has traced it as definitely as possible, furnishing a map with his report, which shows at a glance the boundary line of the infected territory, so far as traced. His inoculations with splenic pulp are also very interesting. The only microscopic germ found was a micrococcus which was not inoculable. The indications are that infected cattle may infect fresh pastures to which they have access, and thus communicate the disease.

Vaccination of fowl cholera has been very thoroughly tested. Dr Salmon devotes much space to the methods of Pasteur and others for attenuating virus. He establishes an immunity sufficient to affect birds during their whole lives, and is a strong advocate for vaccination in hog cholera, fowl cholera, black leg and charbon.

THE COLLECTIVE INVESTIGATION OF DIPHTHERIA (as conducted by the *Therapeutic Gazette*). By J J Mulheron, M D. Detroit, 1883. Geo S Davis.

If it could be made in any way apparent that the majority of opinion at any one time upon a scientific question necessarily, or even probably, is correct, the book before us would have the merit of summarizing such opinion and declaring the result.

The volume is made up of letters from about one hundred physicians, in reply to circulars sent by mail asking each one's opinion as to the cause, nature and treatment of diphtheria.

The expectation of adding anything to scientific knowledge by such a method, is based either upon the assumption that the balance of medical opinion must be in the main correct, or else upon the supposition that some real pathological discoveries will be brought to light, whose obscure authors might otherwise have failed to publish them.

We deny the first assumption *in toto*. It is reasoning in a vicious circle to uphold it. Average medical opinion is based upon medical authorities. The average practitioner, who has to deal with hundreds of complex questions, can add but little to the minute investigations of master pathologists in their chosen specialties. It taxes his industry even to keep abreast of modern discoveries in the wide field he has to cover. How is it possible, then, that the average judgment of average men, obtained by a mere "counting of hands," can be considered of any value other than as a reflex of the teachings of the authorities which each of the witnesses depends upon for his knowledge?

Medical, like other scientific discoveries, are made not by public opinion, but by individuals, and such individuals who have the mental capacity of original investigation do not need the patronage of a bureau of "collective investigation" to discover their talents to the world.

[NOVEMBER,

On the reverse side, it may be said that this book has certainly no tendency to falsify any facts, but rather to confirm present ideas. Although not likely to add anything to scientific knowledge, it may excite interest and discussion in questions rather neglected. The subject of diphtheria is a barren one, showing in very strong light the weakness of the system in a case where so little is known. The conclusions of the editor, after summing up the various views of his contributors, are neither more nor less valuable than if he had taken these opinions at first hand from the standard works, instead of letting the country practitioners do this for him and send him the results. As "collective investigation," so-called, seems to be a new departure in medical investigation, we desire to say a favorable word touching the fair-minded and earnest manner in which the compiler has dealt with the impossible problem set before him. Similar investigations, conducted with a view to obtaining some single definite information (such as statistics), with a less democratic and wholesale list of contributors, may yet prove a most valuable means of balancing and completing our information on practical medical questions.

E W A

MISCELLANEOUS

CHICAGO TRAINING SCHOOL FOR NURSES

The second graduating exercises of the Chicago Training School for Nurses was held on the 22nd of this month. Two years have passed since the training school started with two wards in the County Hospital and six pupil nurses. It now has seven wards, thirty-six pupil nurses, and two probationers. The small hired house, at a very inconvenient distance from the hospital, has given place to the nurses' home, situated within a block of the work.

During the last year 119 applications have been received from persons who wished to become trained nurses. Thirty-four of these were accepted on probation, and only twenty-two out of the number were accepted as pupil nurses. The number of patients cared for in the training school wards during the past year has been 4,301, number of births, 144. In the home the average number of the family has been 30, average for table expenses per month \$234. It was found necessary, in order to complete the new home to borrow money for the purpose. Therefore, bonds to the amount of \$10,000 were issued, secured by mortgage on the property. The society has the privilege of paying these bonds at the expiration of two years from the time they were issued.

The treasurer, Mrs H L Frank, reported cash on hand, \$6,436 84, amount of building fund, \$13,210 36, bonds, \$10,000, amount received from Cook County Hospital for services rendered, \$6,350, ships, \$1,440, subscriptions, \$997 75, interest from banks, \$306 32, seersucker sold to nurses, \$152 59, total, \$39,507 55, expenditures, building, \$22,616 51, hospital expenses, \$3,238, household expenses, \$5 329 55, taxes, \$97 68, insurance, \$168, furniture, \$667 02, printing and postage, \$206 37, balance, \$6,436 84.

The following were elected as members of the new board of directors Mrs Lawrence, Mrs J C Hil-ton, Mrs Edward Wright, Mrs Thomas Burrows, Mrs W S Smith, Mrs H L Frank, Mrs W G Hubbard, Mrs Dr Stevenson, Mrs S L Williams, Mrs A A Carpenter, Mrs Orson Smith, Mrs A A Sprague, Mrs Clinton Locke, Mrs J M Walker, Mrs E Blackman, Mrs Charles Hitchcock, Mrs M Hale, Mrs G W Pitkin, Mrs Judge Rogers, Mrs N K Fairbank, Mrs James Flower, Mrs G Penn Nixon, Mrs G W Smith, Mrs George L Dunlap, Mrs A C Bartlett.

Seven pupils were graduated. The diplomas were given to them by Dr H A Johnson, who made a short address, giving them practical advice. Drs Lynian, Mitchell and Briggs, Mrs Wolcott, of Boston, County Commissioner Donnersberger and J Y Scanmon spoke in regard to the work of the school.

NEW INVENTIONS

INSTRUMENT FOR OPENING PELVIC ABSCESSSES

Prof Clinton Cushing, M D (*Pacific Medical and Surgical Journal*, September), has devised an instrument, consisting of two blades, which when closed form a trocar, and when introduced into the abscess direct, or along the side of an aspirator needle, the handles can be closed, and the extremities separated so as to act as a dilator, and thus tear the connecting tissue sufficiently to furnish the most ample room for the escape of pus and the introduction of a drainage tube. The advantage of this instrument over a knife, he claims, is that the danger of injuring the ureter or an artery is reduced to a minimum, and the advantage over a trocar, is that of being able to make a large and free opening before withdrawing it, and with no additional risk.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE HOSPITAL SERVICE, JULY 1, 1883 TO SEPTEMBER 30, 1883

Bailhache, P H, Surgeon, detailed as member of board to examine candidates for promotion, Aug 23, 1883, detailed as Surgeon-in-charge, Cape Charles Quarantine Station, September 5, 1883

Miller, T W, Surgeon, granted leave of absence for twenty-five days, August 31, 1883

Wynian, Walter, Surgeon, detailed as member of board to examine candidates for promotion, Aug 23, 1883

Long, W H, Surgeon granted leave of absence for twenty days, Sept 25, 1883

Smith, Henry, Surgeon, directed to take charge of the quarantine service at the Capes, July 29, 1883

Stoner, G W, Passed Assistant Surgeon, granted leave of absence for thirty days, Aug 24, 1883, to inspect the relief stations along the coast of Maine, Sept 29, 1883

Goldsborough, C B Passed Assistant Surgeon, granted leave of absence for thirty days, Aug 29, 1883

Banks, C E, Assistant Surgeon, relieved from duty at Portland, Oregon, and to report to the Surgeon-General at Washington, July 10, 1883

Carmichael, D A, Assistant Surgeon, granted leave of absence for ten days, Aug 31, 1883

Peckham Assistant Surgeon, to proceed to Portland, Maine, for temporary duty, Aug 25 1883

Devan, S C, Assistant Surgeon, to proceed to Portland, Oregon, and assume charge of the service, Sept 11, 1883

Kallock, B C, Assistant Surgeon, to proceed to Philadelphia, Pa, for temporary duty July 25, 1883, to rejoin his station (New York) July 31, 1883

Yemans, H W, Assistant Surgeon, relieved from duty at Sitka, Alaska, and to proceed to Portland, Oregon for temporary duty July 10, 1883, to proceed to San Francisco, Cal, reporting for duty to Surgeon Vansant Sept 11, 1883

Glennan, A H, Assistant Surgeon, to remain at Norfolk, Va, until further orders July 29, 1883

Wasdin, Eugene, Assistant Surgeon, to proceed to New Orleans, La, for temporary duty August 2, 1883, to proceed to Mobile, Ala, for temporary duty August 27, 1883, to rejoin his station (New Orleans) as soon as practicable September 25, 1883

PROMOTIONS

Guitéras, John, Passed Assistant Surgeon, promoted and appointed Passed Assistant Surgeon by the Secretary of the Treasury from September 1, 1883 August 31, 1883

Wheeler, W A, Passed Assistant Surgeon, promoted and appointed Passed Assistant Surgeon by the Secretary of the Treasury from September 1, 1883 August 31, 1883

RESIGNATION

O'Connor, F J, Assistant Surgeon, resignation accepted by the Secretary of the Treasury, to take effect August 1, 1883 August 2, 1883

APPOINTMENT

Wasdin, Eugene, M D, of South Carolina, having passed the examination required by the regulations, was appointed an Assistant Surgeon by the Secretary of the Treasury, August 2, 1883 August 25, 1883

SOUTHWESTERN WISCONSIN MEDICAL ASSOCIATION EXCELSIOR, WIS, Oct 17, 1883

Dear Doctor—The fifth regular session of the Southwestern Wisconsin Medical Association will be held at Lone Rock, Wis, Wednesday and Thursday, Nov 21 and 22, 1883, commencing at 10 o'clock A M, on Wednesday Reports will be made by the following standing committees

Surgery (No 1)—U P Stair and R H Delap
Obstetrics (No 2)—T F Stair and Garner
Practices of Medicine (No 3)—Wall and Haskell
Pathology (No 4)—Dinsdale and McGrath
Therapeutics and Materia Medica (No 5)—Coats and

Kermott Gynæcology (No 6)—Casey and Helm
New Remedies (No 7)—Armstrong and Gyer
J C WRIGHT, M D, Sec'y

P S—It is the desire of the Association to have all regular physicians present, that we may have an enjoyable and profitable session J C W, M D

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING WEEK ENDING OCTOBER 27, 1883

Surgeon W K Van Reyepen detached from the Naval Hospital, New York, and ordered to the U S S Powhattan

Surgeon H M Wells detached from the Naval Laboratory, New York, and ordered to the Naval Hospital, New York

Medical Inspector A C Gorgas' orders modified so that he will be detached from the Naval Hospital, Chelsea, Mass, on December 10th instead of on November 10th

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM OC TOBER 19, 1883, TO OCTOBER 26, 1883

Bache, Dallas, Major and Surgeon, assigned to duty at Willet's Point New York (par 1, S O 238, A G O, October 18, 1883)

Horton, S M, Major and Surgeon, leave of absence for one month, with leave to apply for an extension of three months (par 6, S O 216, Department of the Missouri, October 20, 1883)

Barnett, Richards, Captain and Assistant Surgeon, assigned to duty at Columbus Barracks, Columbus, Ohio (par 1, S O 240, A G O, October 20, 1883)

Maus, Louis M, Captain and Assistant Surgeon, assigned to duty at Fort A Lincoln, D T (par 4, S O 180, Department of Dakota, October 15, 1883)

NECROLOGY

WOODMAN, LUCIUS C, M D, was the son of Rev Jonathan Woodman, and was born in Sutton, Caledonia county, Vermont, March 20, 1828, died at Paw-Paw, Michigan, April 12, 1883, aged fifty-five years

Dr Woodman, after receiving a fair academical education, studied medicine in the office of Dr Kimball, of Lowell, Massachusetts, and graduated at the Medical Department of Vermont University, located at that time at Woodstock, Vt, in 1847, at the age of 21 Being threatened with consumption, of which disease his elder brother, also a physician, had died, his friends advised a change of climate, and he came to Michigan about 1851 After measurably regaining his health, he commenced practice with Dr Andrews, of Paw-Paw, Michigan, with whom he continued till the breaking out of the war of the Rebellion, when he entered the Third Michigan Cavalry regiment as Assistant Surgeon, and served in it as

NECROLOGY

[NOVEMBER, 1883]

such until 1863, when he was commissioned Surgeon of the Eleventh Michigan Cavalry, and continued to serve in that capacity till the close of the war, and was mustered out of the service in August, 1865. During the war he was at one time taken prisoner, and spent a few weeks in Libby prison.

As an army surgeon he was kind, faithful in the discharge of his duties, and exceptionally skillful. He was truly the soldier's friend, and by all ranks universally beloved. "Everywhere brave, he faced a thousand deaths to stand between death and the soldiers."

At the conclusion of the war he went to South Haven, Michigan, where he practiced his profession till May, 1877, when he returned to Paw-Paw, where he remained till his death.

As a physician and surgeon Dr. Woodman had a wide reputation, which he thoroughly merited, for he did his work faithfully and well. He was a careful and skillful operator, and an exceptionally fine diagnostician, particularly in diseases of the heart and lungs. He was by nature and study singularly well equipped for the successful practice of his profession in all its branches. The thorough hold he had upon his patients and friends was something almost wonderful. Dr. Woodman was a member of the Van Buren County Medical Society, of the Michigan State Medical Society, and of the American Medical Association. He left two young sons, who are doubly orphans, having lost their mother only a few weeks previous to the death of their father.

J. ANDREWS, M.D., of Paw Paw, Michigan.

BRALEY, NORMAN WING, M.D., was born in Pomfret, Vt., August 14th, 1823, died at Barre, Vt., September 11th, 1880.

He was the eldest child of Geo. W. Braley and Desire Brockway Braley, natives of Stamford, Conn. His father was descended from a Scotch-Irish family, who came in the early part of the present century to this country. Norman was the eldest of six children, three of whom survive him. His preliminary education was from the district school at home, and from the academy at Woodstock. He studied medicine with Dr. P. R. Palmer, and graduated at the Medical College at Woodstock in June, 1844.

He settled in medical practice late in the year 1844, at Washington, Vt., where he remained about six years, during which time he was married to Miss A. P. Calef, of Washington. In 1852, after having traveled through the West in search of a more desirable location, he settled in Chelsea, Vt., in co-partnership with Dr. McClure, when at the end of two years the latter retired, leaving Dr. Braley alone.

Then he made an extensive reputation, and won the confidence of the public and of his neighboring physicians, so that he had a large consultation practice, and was considered the leading physician of Orange county.

In 1872 he removed to Barre, and partially retired from medical practice. Here he became President of the National Bank of Barre, and engaged in manufactures and other financial business. Still, he occa-

sionally practiced his profession until his death, which was after a short illness at his home.

He left a widow and three sons, the eldest of whom is a physician, and succeeds his father in practice at Barre (Dr. B. W. Braley). The two younger are yet at school. Dr. Braley was everywhere respected for the purity of his character, for his agreeable presence, with a suavity of manner that made him always a welcome guest, and for his skill and fidelity in attendance upon the sick. He died lamented by a large circle of real mourners, and his loss will long be felt in the communities in which he was so prominent and useful a member.

O. F. FASSETT, M.D.

YOUNG, NOBLE, M.D., of Washington, D.C. Was born in Baltimore, Md., June 26, 1808, died at the residence of his son-in-law, Maj. H. A. Egbert, at Sackett's Harbor, N.Y., April 11, 1883. He prepared for college at the Catholic seminary in Washington. Entering Columbia College, he took a regular course, his medical degree in 1828. He then began the practice of his profession, and at the time of his death was the oldest practitioner in Washington city, and lived for nearly sixty years in the same house, on Pennsylvania avenue. Dr. Young was a man of extensive acquirements, a good Latin and French scholar, and particularly fond of the best belle-lettre literature. He was most entertaining in conversation, a good writer, and a forcible debater, and one of the most attractive lecturers on the general principles and practice that any college could boast of. Dr. Young was one of the chief promoters and founders of the Medical Department of the University of Georgetown College. This school was opened in 1849, and Dr. Young held the chair of the principles and practice until 1876, when he resigned, and was elected emeritus professor. He was for many years connected with the Board of Health prior to the war. During and since the war he was Physician to the Jail. His contributions to medical literature are chiefly addresses. He was one of the charter members of the Medical Society of the District of Columbia, and one of the original members of the Medical Association of the District, and filled the various offices of each, including that of President, and member of the American Medical Association since 1848. He was a member of the Board of Directors of Columbia Hospital for Women. These institutions convened special meetings, and passed resolutions of respect for his memory. The doctor married, early in his professional life, the daughter of Dr. Alexander McWilliams, she died less than a year before himself. He leaves five children. His funeral took place from Trinity church, the Rev. Messrs. Addison and Forrest officiating. His remains were followed to the last resting place in the Congressional cemetery by a large concourse of relatives and personal friends.

J. M. T.

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ORIGINAL ARTICLES

WHAT MEANS CAN BE JUDICIOUSLY EMPLOYED TO SHORTEN THE TERM AND LESSEN THE PAIN OF NATURAL LABOR?

BY JOHN MORRIS, M D, OF BALTIMORE

(Read before the Section on Obstetrics and Diseases of Women June, 1883.)

In no one thing has the wisdom and genius of the age been more thoroughly exhibited than in the advance and elevation of the art of midwifery. Once considered an inferior branch of medicine, it has, through the vigor and enlightenment of those pursuing it, risen to the highest rank in the scale of the sciences. Men have learned to properly appreciate the knowledge and skill by which, in the most critical hours of existence, pain is ameliorated, sorrow assuaged, and life saved. Through the goodness of God, the original curse placed on the mothers of men has been softened, if not nullified. "In sorrow thou shalt bring forth children" will, before this generation has passed away, be but a record of the agony of the past.

In the consideration of this subject, my purpose is to present some views to you, based on my own practice, concerning the management of women in labor. My object in the presentation of these views is to elicit discussion and to bring out the experience of the gentlemen assembled in this Section, a large number of whom I know have practiced midwifery for many years. There is still, I hold, enough to be learned concerning parturition to engage the attention of even the most accomplished student. I shall confine myself entirely to the management of natural, uncomplicated labor, as my time is limited, and I deem this branch of midwifery of the most practical importance. Meddlesome midwifery is, of course, to be deprecated, and the suggestions I am about to make can only apply to what are termed cases of lingering labor.

There are three stages or conditions in which labor may become lingering, and to deal with these states successfully, different procedures must be made use of. First, labor may be lingering when the head is delayed at the brim of the pelvis, second, when the os has dilated to some extent, and the head has descended into the vagina, and thirdly, when it has reached the vulva and impinges on the perineum. It is usual to describe lingering labors as occurring in the first and second stages, but I think the division I have adopted will serve better for the elucidation of the subject.

When labor is tardy in the beginning, the os dilating very slowly, the pains feeble and irregular, and the head high up, means may be carefully employed to hasten its progress, but if the woman is cheerful and hopeful, interference may be delayed. This delay must not be suffered to extend, as Churchill and others have recommended, for twelve or sixteen hours, for, if the woman's powers are allowed to become exhausted in the first stage, instrumental interference becomes a necessity in the second. In the condition described the os is frequently dilatable, but the membranes do not come down to act as a dilating wedge. In these cases it is good practice to detach the membranes around the cervix, and Brown, of Vienna, recommends the introduction of an elastic catheter between the chorion and the walls of the uterus for this purpose, but this can be much better effected, in my judgment, by the cautious use of the finger. After the membranes around the cervix are detached in this way, if gentle pressure is used around the whole margin of the os with the soft part of the finger, gently stretching it, the bag of waters will commence to project, the os will gradually dilate, and the pains become effectual. I have seen many cases of labor in this stage expedited by this plan. In some instances the membranes rupture prematurely, and the head becomes the dilating force. These cases are usually very painful, but they can be greatly hastened if the finger be swept cautiously around the os at each pain. In cases of tardy dilatation of the os, due to rigidity, in which the woman suffers acute pain, the administration of opium is most beneficial, and should always be resorted to. A hypodermic injection of ten drops of Majendie's solution, or thirty or forty drops of McMurran's elixir, given internally, acts like a charm. Ineffectual contractions do injury to the woman, and when you cannot advance labor you had better arrest it. I do not think the administration of chloroform is wise at this stage.

There is occasionally a form of unequal, spasmodic contraction, well described by Velpeau, which is sometimes confined to the fundus, sometimes to one of the angles, or to a portion of the anterior or posterior wall, or one of the sides of the uterus. The pains are very acute, but merely exhaust the woman's strength, and, unless an anodyne is administered, labor will be prolonged indefinitely. Belladonna has been used and much praised as a remedy in this condition, but in my hands it has proved utterly useless. Brown's colicurgenter introduced into the vagina, and fully distended with hot water by means of Davidson's syringe is, I have no doubt, the best

iest and best means to produce relaxation of all the parts and hasten the labor. It is astonishing how rapidly the os will dilate by the means of this instrument. I have seen by its use in cases of eclampsia, apoplexy, hæmorrhage, etc., the os sufficiently dilated in a few hours to admit of the application of the forceps, and a rapid termination of the labor. My experience in cases of this kind has taught me its usefulness in normal labor. The colpeurynter may be emptied and re-filled every half hour until dilatation is effected¹.

There is a condition of the uterus which retards labor and gives rise to trouble. The os is dilated to some extent, but the fibers of the cervix above it contract, forming a rim or band. Barnes' hydrostatic bags can be used with great advantage to relax the contracted cervix and allow the descent of the head, but in ordinary cases of contraction I think the colpeurynter serves a better purpose.

The long forceps are frequently resorted to when the head remains for a length of time at the brim of the pelvis, but their application will seldom be necessary if the means I have indicated be cautiously and judiciously employed. I have not found it necessary to perform what is termed the high operation more than three or four times in a midwifery practice of more than thirty-seven years. In addition to the measures I have suggested at this stage the patient must be kept out of bed in a vertical position, and not suffered to bear down or make any muscular effort. There is no doubt that the erect posture is the best before the head descends into the lower strait. The conservation of the woman's powers, too, at this period is of the greatest importance.

There is usually no danger to the life of the mother in the first stage of labor as long as the membranes remain intact, and, on this account, it may be argued that interference is not necessary, but this view I hold is both inhuman and unscientific. Inhuman because it condemns the woman to unnecessary suffering, and unscientific because it leaves agencies unused and powers unaided, which, if employed, would shorten a painful and vital process.

In what I term the second stage, that is when the head has descended into the pelvic cavity, there are two conditions of lingering labor. In the first, though the os may be pretty well dilated, the labor is retarded by the firmness, dryness and want of distensibility of the vagina. Free injections of hot water are useful at this time, and if the membranes be intact it is good practice to rupture them. When the vagina is extremely dry and hot, after the use of the hot water douche, the introduction of a large cotton tampon saturated with glycerine and lard serves a good purpose in softening and dilating the parts. I would add, that if inertia exists at this point, the administration of a drachm or two of the extract of ergot aids the other measures most effectively. But if the arrest of the head is due to occipital-posterior positions it is unsafe and unscientific to administer ergot—the forceps is the only alternative. In these instances there is very little amniotic fluid and no

bag of waters is found, indeed I have seen many cases which might absolutely be termed dry labor. After the rupture of the membranes, if strong external compression be used and the os gently stimulated and stretched by the pulpy part of the finger, the pains will be prolonged, the voluntary powers of the woman excited and strengthened, and the labor progress to a speedy close.

The second lingering condition in this stage is when the head is very low down in the pelvis, the os dilated to the size of a half dollar, and found far back toward the sacrum, the head of the child being curved as with a cap by the thinned neck of the uterus. This is a most painful state, and calls loudly for assistance. The membranes, if not ruptured, must be punctured immediately, the os stretched and drawn forward toward the pubis, and strong external pressure used during each pain. Ergot is not generally necessary in this condition, but if the pains are ineffectual, its administration is most beneficial, the labor is accelerated, the woman's voluntary powers are evoked, pain follows pain, and the case has a rapid and happy termination. One of the most trying features in these cases is the intense pain in the region of the sacrum. This can be greatly alleviated by the application to the spine of an embrocation of chloroform and oil of peppermint.

Since writing the foregoing portion of my paper, I assisted in a case, the results of which prove the practicalness of the suggestions I have made.

On the morning of the 28th of May, I was called in by Dr. Ashby, Professor of Obstetrics in the Woman's Medical College of Maryland, to assist him in a case of eclampsia. The doctor had been all night with the woman, had bled her, given hypodermic injections of morphine, and used chloroform very liberally. There was no external evidence of actual labor, but the os was slightly dilated. I ruptured the membranes, distended and stretched the os, pushed down the child by forcible external compression, applied Knight's forceps inside of the uterus, and terminated the labor in forty minutes from the time I reached the house. The child was living.

The most powerful aid in all these cases is forcible external compression. A number of mechanical contrivances have been used to support the abdominal muscles, and secure regular and equal contractions of the uterus, but they are awkward and cumbrous, and do not at all compare in usefulness with the intelligent human hand.

The third and last stage of lingering labor is where the head has descended to the perinæum and owing to inertia of the uterus, or exhaustion of the woman's vital powers, or to the rigidity of the muscles of the perinæum, the labor is indefinitely arrested. Hamilton reports a case in which the perinæum was supported in this condition for one hundred and twelve hours. Ergot may be used at this point combined with external compression, but if delivery does not take place speedily the forceps should be applied. Beattie's straight Dublin forceps is the best, being light and easy of application. These are simple tractors and can do no possible harm. I have observed that if we fail in manipulations with the for-

¹ If the colpeurynter is not at hand a small bladder will act equally as well.

ceps the labor appears to be arrested and the woman's voluntary powers cease to act, consequently unless one feels convinced that the case will be terminated speedily by instrumental interference, it is better not to attempt it. I have frequently endeavored to extricate the head by passing two fingers into the rectum, but have failed in this maneuver for the reason that the force necessary to be employed is likely to injure the soft parts. The proper management of the perinæum is very important. I have been practicing for years a form of attenuation from the very moment that the head commences to impinge upon the outlet, and I believe that I have greatly assisted the efforts of the woman. If the head is still within the uterus at this point, it is good practice to make a sweep with the finger and push the os over the occiput. I generally deliver the patient on the left side, as that position is better for the touch and use of the hand, but sometimes I have thought I found good results from placing the woman on her back and allowing her to have a few pains in that posture. I am confirmed in this opinion by the experience of a case to which I was called the morning before I left home by Dr. George B. Reynolds, of Baltimore. The head had remained at the outlet for more than three hours without making the slightest progress, when the Doctor fortunately changed the position of the patient, and the labor was quickly terminated.

In conclusion, I would state that the great advantage of the procedures briefly suggested in this paper is, that should they fail, they do not interfere with the after-use of the forceps, but rather prepare the way for their easy application. Moreover, I hold that, if properly employed, they prevent those two *betes novi* of modern obstetrical literature, lacerations of the os and perinæum. In addition to this, I believe that post-partum hæmorrhage, that worst complication of midwifery, may also be averted, for it is the weary, out-worked uterus that floods, not the fresh and vigorous organ.

In making these suggestions, I do not wish to be understood as recommending an imitation of the *lesser labours* of the French, where the accoucheur, with rolled up sleeves, presents himself in front of the patient, and with a great flurry and show of manipulation leads the bystanders to believe that he himself is doing the parturient work—but a scientific employment of measures which experience has proved to be both rational and useful in furtherance of the greatest physiological process known to mankind.

THE VALUE OF GYNÆCOLOGICAL TREATMENT IN HYSTERIA AND ALLIED AFFECTIONS

BY PHILIP ZUNFR, A. M., M. D., CINCINNATI, O.

[Read in the Section of Obstetrics and Diseases of Women June 1883 and referred for publication.]

That lesions of the female genitalia are sometimes productive of hysteria or allied affections—that the removal of the local lesion sometimes alleviates or cures the nervous disease is proven by past experience. Happy results thus obtained in the manage-

ment of cases usually so intractable naturally inspire the hope that a like cause for these diseases will always be found and tempt one to the institution of like measures in their treatment. And in practice we actually see that it has become only too fashionable to institute gynæcological examination or treatment on account of the presence of some nervous affection. These efforts might be deemed laudable were it not that they have also their shadow side, that such measures may injure as well as benefit. That gynæcological examination or treatment may be productive of injury, that harm has been done in this manner should be fully recognized, lest injudicious measures throw entire discredit on the value of the assistance often afforded by the gynæcologist in the management of nervous diseases.

On account of the practical value of the questions in issue, it may not be unprofitable to consider the ætiological relationship of disease of the female genitalia to hysteria and allied affections, and the good or ill effects which may attend local therapeutical measures. Should the paper call forth the views and experience of eminent men here present, it may lead to valuable results.

Hysteria is a disease of the nervous system, perhaps affecting the entire nervous system, at least the great nervous centers are particularly involved. It depends upon peculiar pathological conditions of those centers which the microscope or other tests at present in our possession do not reveal. We therefore term it a functional disease. That a peculiar condition of the nervous system underlies the development of hysteria is seen in the fact that it usually occurs in individuals predisposed to such affections. The predisposition is generally of hereditary transmission. It is sometimes favored or acquired through false systems of education, the evils and abuses of modern society, the drain of exhausting diseases, the deprivations and toils of poverty or the like. How important a part the predisposition plays in the causation of the disease must never be forgotten when we consider the practical subjects prophylaxis and therapy.

The predisposition alone seems sometimes sufficient for the development of the nervous malady, though usually some exciting cause calls forth its first manifestations. Most frequently this is of psychic origin, emotional excitement, fright, or the slower action of some strong and absorbing passion. Not uncommonly the exciting cause appears to be some peripheric source of irritation, producing the disease in a reflex way.

The preceding remarks will enable us to consider more intelligently its ætiological relationship with diseases of the uterus and ovaries. The latter may in a reflex way, through irritation of the genital nerves, be the exciting cause of the disease in those already predisposed to it. Or they may through protracted pain or hæmorrhage, through depriving the patient of fresh air or exercise, in short through these injurious influences on general system at the same time produce the predisposition and be the exciting cause of the existing nervous malady.

Doubtless an important element in these cases is the deleterious influence of the mind's dwelling upon

the local disorder, which only too often has been intensified by local treatment

But are local lesions a very frequent cause of hysteria? There are some who still hold that hysteria is always dependent on the disease of the female genitalia. But the facts that the disease occurs also in men, that it occurs in children before puberty, that frequently the most careful gynæcological examinations,* and even post-mortem inspections, have revealed no pathological changes in those organs, and that it has been found where the uterus was congenitally missing remove all reasonable grounds for such views. It is even doubtful whether hysteria is very frequently due to such causes. Let us examine the grounds which have given rise to this belief.

A close relationship between genital functions and nervous diseases is seen in the frequent development of the latter in important periods of sexual life. The time of puberty and the climacteric periods are especially favorable for the outbreak of nervous diseases. The periods of gestation and lactation have, though less frequently, a similar record. During menstrual periods, existing nervous manifestations are usually aggravated. But we would little understand the great economy of nature, should we attribute these disturbances to mere local causes. The great changes in sexual life are changes, not in the local genitalia alone, but in the entire organism. And because the nervous system is unusually impressible at periods of such physiological importance, we must not falsely conclude that local pathological changes should produce trouble of like consequence.

It is an undoubted fact that hysteria and uterine diseases very frequently occur together. But we must not thence hastily conclude that the one must be dependent on the other. Probably, as a rule, this is a mere coincidence, a like soil being favorable for their growth. Both occur frequently in those who have borne children, both are common in weakly individuals, these conditions being favorable for the production of uterine disease, as well as for the development of hysteria.

We must not even draw too hasty conclusions from the favorable results of therapy.

Doubtless, in many cases, reported as cured by gynæcological treatment, the rest, hygienic measures and constitutional treatment did much to bring about the happy result.

If, for the above reasons, we would warn against too hasty conclusions as to ætiological relationship, we can speak far more emphatically of the frequent inutility or needlessness of local treatment. It is no uncommon thing in practice to see uterine lesions disappear without improvement of the nervous symptoms, as also the cure of the nervous disease while the lesions in the genital organs remain. The great significance of such facts cannot be overlooked. As it is very interesting in itself, allow me, in this connection, to mention a case reported by Rosenthal. In a woman who had never menstruated, and with monthly recurrences of attacks of hysterio-epilepsy, after everything else had been tried, Battey's operation was performed. For five months the attacks were very light, but after that lapse of time they be-

came as severe as before. The shock of the operation probably caused the temporary improvement. But the "unsexing" the woman had no influence on the hysterical seizures.

The lack of therapeutic success by no means proves the absence of ætiological relationship. While a local disease may have been the predisposing or exciting cause of the nervous affection, the latter, depending on now existing changes in the nervous system, has become independent of the peripheral lesion, and is unaffected by its removal.

For this very reason must our therapeutical measures usually be directed to the condition of the nervous system, more than to the possible sources of peripheral irritation.

My first experience of this kind led me to hope for very much from local treatment. The patient was under my charge, while interne in the Cincinnati Hospital, in the service of the late Dr. M. B. Wright. She had been suffering for months with constant headache immediately following a lying-in. An examination revealed ulceration of the cervix. During the treatment of the latter condition the headache disappeared. At the time, I attributed the cure of the headache altogether to the local treatment. But it should not have been forgotten that while in the hospital the woman had rest, good nourishment, and tonic medication.

A second case was one of severe migraine, of four years' standing, immediately following a confinement. An examination revealed slight displacement and endo-cervicitis. A pessary was introduced. The patient subsequently became pregnant, and during her pregnancy was entirely free from headache (a not uncommon occurrence in cases of migraine). But after delivery the headaches soon re-appeared, and now, after a lapse of three years, are as severe as they ever were. A recent examination by a prominent gynæcologist failed to detect any uterine lesion. The entire history of the case indicates that the uterine lesion was probably the exciting cause of the migraine, but the cure of the nervous disease did not follow the removal of the cause.

A third case I shall mention is that of a woman 37 years of age, who suffered from migraine from girlhood. Uterine symptoms for many years. Some operation was performed four years ago, physician told her it was for intra-uterine tumor. Since that time her condition has been much worse. The headaches, previously occurring only in paroxysms, have become continuous and of great severity, and many other hysterical manifestations have appeared. Nothing abnormal can be detected in the pelvic organs. Here the change for the worse dates directly from the operative interference, and appears to be due to local measures.

I might add details of other cases in which gynæcological interference had entirely negative results.

In a recent number of the *Berliner Klinische Wochenschrift* (No. 10), Peretti, physician to an asylum for the insane, gives the details of a number of cases in which gynæcological examination or treatment were directly productive of injury. In some, local treatment, in others a mere examination

either were the direct exciting causes of an outbreak of insanity, or greatly aggravated the condition of those in whom the disease already existed. In proof of the direct relationship between the gynæcological measures and the mental condition, he mentions that the patients usually had delusions or hallucinations of a sexual type, in which the examining physician was the central figure. In these cases proper constitutional treatment, without gynæcological interference, led to a full recovery.

Let us briefly consider in what way local measures may be productive of injury. We have above briefly referred to the great influence of the mind in the production of nervous diseases, and this is doubtless the chief source of injury here. To a sensitive maiden nothing is more distressing or humiliating than such examination, and the matron often experiences the same feeling. Besides, there is the deleterious influence produced by the knowledge of the presence of such lesions. There are no other diseases which cause the mind to dwell so persistently on the diseased organ as those of the genital organs. This fact is universally recognized, and in just such cases this influence of the mind is especially injurious. It is always an important part in the treatment, to divert the thoughts from the genitalia, as far as possible.

There is this further consideration that local measures may do harm in the same way as local lesions, that is, in a reflex way by irritation of the genital nerves. It is probably in this way that the aggravated condition of the third patient mentioned above, after an operation is to be explained.

These possibilities of injury should never be forgotten when resorting to such measures in the individual case. Playfair states that he has often known the condition of hysterical patients to be aggravated by injudicious gynæcological interference, and Freudenburg declares beginning nervousness to be rather a contra-indication to the institution of local measures, adding that more harm is done by the latter, than by their complete omission.

What, then, can be said as to the propriety of such interference in these cases?

Fortunately, according to the bulk of experience hitherto, an ætiological relationship appears to exist, and beneficial results from local measures seem to be obtained principally in displacements, metritis, and like conditions, where the lesions generally cause decided local symptoms and in themselves demand local treatment. The propriety of such treatment in these cases can not be questioned. But we can not too strongly condemn the promiscuous gynæcological examination of girls or unmarried women, merely because there are nervous symptoms.

And even when local lesions are present, if their treatment seems to aggravate the nervous symptoms through the influence of the mind, in a reflex way, or in whatever manner, it should be discontinued. It will always be necessary to individualize, and success will largely depend upon the wise choice and judicious management of the physician, at least until the time when a fuller knowledge will enable us to know more definitely where an ætiological relationship

exists, and where local treatment must be of benefit.

In the meantime it must be remembered that the general treatment, the toning up of the nervous system, is always the most important object. In fact the duty of the physician demands much more than the mere treatment of existing nervous manifestations. He should attempt to prevent the disease, to eradicate the predisposition upon which it depends. He must warn society that the idle lives of its fashionable ladies, with just such employments or amusements as heat up an already wayward imagination, or foster the morbid feelings in their nature, must produce hysterical affections in them, just as overwork, intense application to business, and, even more, the unfortunately common habits of public and private gambling, are leading to immense mental injury among men.

The physician should follow the history of the predisposed individual and attempt to prevent the development of the disease. He should inculcate the practice of proper hygienic regulations in childhood, point out a system of education that will soundly develop body and mind, and lead to habits of self-control and unselfishness, but especially at the period of puberty, by suggesting useful employment or earnest study, should he guard against means that heat a naturally too fervid imagination, and, above all, try to keep the thoughts from the genital functions.

When the disease already exists, proper moral, hygienic and constitutional treatment, hydrotherapy, etc., and, in very obstinate cases, the plan of treatment brought forward by our eminent countryman, Weir Mitchell, will often lead to happy results.

ON THE PATHOLOGY OF PHTHISIS PULMONALIS AND ITS LARYNGEAL COMPLICATIONS

[Read before the Philadelphia Pathological Society at its semi-annual Conversational Meeting Oct 22 1883.]

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In bringing the much discussed subject of the pathology of phthisis again before the Society an apology is perhaps owing which will be found in the renewed interest which the investigations of Koch in the ætiology of this disease have aroused. It is, however, not the purpose of this paper to discuss the bacillus theory of tuberculosis nor to enter in detail into the pathology of phthisis. The main object is to sketch the laryngeal complications of phthisis, and point out their difference from those noticed in tuberculosis. This can, however, not well be done without first considering, in a general way, the differences between the two diseases themselves, and I will, therefore, in a few words relate my individual views on this subject—views which are not quite in accord with those of many of the authors on pathology, but which have forced themselves upon me by pathological study and clinical observations. Let us briefly review first the characteristics of the disease known as tuberculosis, and then those of phthisis.

organ and invade others by metastasis, as when they occur in the lung and later show themselves in the larynx, or they may be disseminated throughout the system invading all the organs, as in general tuberculosis. These neoplasms, or miliary tubercles as they are termed, rapidly undergo retrograde metamorphosis which ends in caseation.

Histologically considered these tubercles consist mainly of a collection of granular lymphoid cells surrounded by a delicate reticulated tissue. Large, often branched and multinucleated cells are frequently seen which, according to some authors, are true giant cells and considered by them as characteristic of tubercle, but which I am inclined to look upon with others as sections of obstructed lymphatics, or lymph spaces, the endothelium of which has proliferated. As the tubercle grows older and the retrograde metamorphosis progresses, the cellular elements become converted into a collection of granular material and finally a cheesy degeneration takes place which involves the whole tubercle, obliterating it as such. The deposit of tubercles in the lungs occurring primarily in the interalveolar connective tissue, gives rise to a variety of changes in the lung tissue itself, the magnitude of which depends upon the number of the tubercles and the rapidity with which they are formed and decay and also upon the condition of the system at large.

In the first place a low grade of inflammation is set up in the immediate neighborhood of the tubercle the exciting cause being the tubercle itself. A small cellular infiltration invades the alveolar walls. The epithelial cells lining the alveoli proliferate and become detached and swollen, thus filling the lumen of the alveoli, causing consolidation of the lung tissue. The pressure exerted upon the capillaries in the alveolar walls by the filling of the alveoli as well as by the infiltration of the connective tissue interferes with the circulation. Nutrition of the tissue being thus cut off and the absorption of the inflammatory products by the lymph channels made impossible, death of the tissue must necessarily set in sooner or later. At the same time the inflammation being cut short no new inflammatory products are thrown out, and those already existing undergo retrograde metamorphosis into cheesy degeneration.

This same pathological picture is found in every organ of the body and is but slightly modified by the histological differences of the tissues in which the tubercle is deposited. Thus, for instance, in the mucous membrane of the larynx it is the glands and follicles which furnish the proliferating epithelium and because the capillary network is spread over a much larger area than is possible in the thin alveolar walls of the lungs, death of the tissues by obstruction of the circulation, *i. e.*, ulceration occurs in spots while the surrounding tissue is still in a state of inflammation.

The ultimate result of pulmonary tuberculosis as we all know, is a rapid breaking down of the lung tissue and death of the individual within a few months from the onset of the disease. There are, however, a few cases in which the deposit of tubercles takes place in a very limited portion of the lung

tissue only, and which will, under favorable circumstances remain isolated, becoming encysted by a wall of fully formed connective tissue the result of a higher grade of inflammation, to which the tubercular process has given rise in the surrounding tissue. There are also some few cases in which a limited number of tubercles are deposited in various portions of the lungs and which by their presence give rise to an inflammation followed by consolidation and decay of the lung tissue. This consolidation differs, however, from that produced directly by the tubercular process, and is identical with the pathological process seen in phthisis.

The outbreak of tubercle in an organ or throughout the body is, in my opinion, not dependent upon the introduction into the system of infectious material which originates external to it, but is caused by the dissemination of infectious material existing within the system, though it may have remained latent for a long time. This infectious material, however, can only be found under a peculiar condition of the system in the form of cheesy deposits, and this condition is known as scrofula. Scrofula existing as it does in certain animals and individuals of the human race depends, according to Dr. Formad, whose theory seems plausible, in an abnormal richness of cellular elements and narrowness of the lymph spaces of the connective tissue. If, then, under these circumstances an inflammation occurs the narrow lymph spaces become clogged by the inflammatory products unusually rich in cellular elements which, undergoing retrograde metamorphosis become cheesy deposits instead of being carried off or becoming organized as is the case in the normal condition of the tissue. A cheesy deposit of this kind may remain dormant in the organ in which it has been formed for an indefinite period, but if by any chance portions of it enter the lymphatic circulation, tuberculosis is the result.

The transmission of tuberculosis from one person to another which is occasionally met with, can easily be accounted for by the facts that the person becoming infected was either scrofulous from the start, although the diathesis may not have shown itself prior to the deposit of tubercle or, what is more likely, the early history of glandular enlargement, and so forth, has been overlooked and the fatigue and privation consequent to the nursing of the tubercular patient has given the necessary impetus for the production of the disease, or else the vitiated atmosphere, fatigue, loss of sleep, and the mental strain and anxiety prior to and after the death of a husband or wife affected with tuberculosis, reduces a formerly normal constitution to a scrofulous one and renders the faithful nurse liable to contract the disease.

Transmission of tuberculosis from a patient to a nurse or attending physician, where the latter are not exposed to the evil effects of bad sanitary surroundings and where they are not scrofulous, has, I think, never been observed. In regard to the causation of the disease by the introduction of bacilli or bacteria into the system of healthy, non-scrofulous persons, I am not prepared to express an opinion, since the sub

ject has as yet not been sufficiently investigated, and the experiments on animals are, to my mind, not conclusive enough to warrant the acceptance of the bacillus theory of the causation of tuberculosis. Scrofula usually is inherited, but it may be acquired, and is then caused by anything which lowers the vitality of the system at large, and particularly diminishes the hysto-genetic power of the products of inflammation.

Phthisis, on the other hand, may be defined as a progressive consolidation of the lung tissue, due to a more or less localized inflammation, affecting primarily the apices and undergoing retrograde metamorphosis. Phthisis is an inflammatory disease. Histologically considered, this consolidation of the lung tissue consists of an infiltration of the alveoli by inflammatory products, and exudation from the blood-vessels containing a number of leucocytes. Under the microscope it closely resembles the alveolar contents seen in catarrhal pneumonia, that is, it shows a fibrinous structure, intermingled with granular debris, red and white blood corpuscles. This infiltration begins to soften and undergo a sort of mucoid degeneration, when the epithelium of the alveolar walls proliferates. The epithelial cells, on account of a want of vitality, instead of multiplying by division, simply increase in size, and becoming detached, intermingle with the contents of the alveoli, filling them completely. They also undergo degeneration, so that they are soon not recognizable as cells. At the same time, a small-celled infiltration occurs in the alveolar walls and in the interlobular connective tissue, which, possessing a certain amount of hysto-genetic power, changes into a low form of fibrous tissue. This infiltration is noticed also very early in the disease, in the peri-bronchial connective tissue. The macerating influence of the semi-fluid contents of the alveoli upon the epithelium soon denudes the alveolar walls of their protecting covering, while the pressure of the interalveolar infiltration upon the capillaries interferes with circulation without, however, obstructing it entirely, and thus the first step toward destruction of the lung tissue by ulceration is taken.

The gradual breaking down of the interalveolar tissue merges the contiguous air vesicles into one, and a cavity is formed, which may or may not be surrounded by a wall of newly formed connective tissue, the formation of which depends upon the amount of inflammation excited in the contiguous lung tissue by the ulcerative process, and also upon the amount of hystogenetic power possessed by the inflammatory products. If, in the progress of decay, a larger blood-vessel is opened, a hemorrhage is the result. After a time, the interlobular and peribronchial connective tissue is largely increased in thickness by a deposit of newly formed fibrous tissue, which gives rise to an alteration of the circulation in the bronchial mucous membrane, causing first inflammation, with proliferation of the epithelium on the surface, as well as in the glands and follicles, and later aneurism by pressure upon the capillaries, and often ulceration. There are, however, many cases in which, by proper nourishment and better oxygenation of the blood

the hystogenetic power of the inflammatory products is increased, while the alveoli are evacuated of their contents by expectoration, and the consequence is an isolation of the cavities by a strong wall of connective tissue, and the formation of fully formed fibrous tissue in the interalveolar and interlobular connective tissue, which formative process tends to cut short the retrograde changes in the lung tissue.

The different forms and stages of phthisis, as they are recognized and described by some authors, are merely differences in the degree of the inflammatory process, or in the extent of the retrograde change.

Phthisis is produced by a peculiar condition of the system at large, which may be designated as impaired vitality, and by a peculiar predisposition of the lung tissue to inflammation, which may be termed weakness of the lungs. Both these conditions may be, and mostly are, inherited, but in many cases they are acquired. The children of parents who are phthisical or syphilitic, have been drunkards or suffered from a cancerous disease, inherit a lowered vitality, not necessarily scrofula, which shows itself in a want of hysto-genetic power of the inflammatory products, and also in a weakness of the lungs and upper air passages, predisposing them to chronic inflammation.

Insufficient or inappropriate food, want of exercise and of fresh air, long continued mental strain, peripheral nervous irritation, and acquired syphilis, are among the most potent factors which will produce this same lowered vitality of the system and its histological elements in individuals who have not inherited this peculiarity. Thus, for instance, uterine disease will frequently give rise to phthisis, by peripheral irritation and the consequent lowering of the vitality.

Phthisis will be developed in other cases by the prolonged sojourn in badly ventilated rooms or workshops the air of which is laden with dust or noxious gases, and thus we find that shoe-makers, carpet-weavers, cigar-makers, and operatives in cotton mills supply a very large percentage of all cases of phthisis in large cities. Obstruction of the nose by hypertrophic nasal catarrh or by tumors, also may, and often does, produce phthisis in a considerable number of cases, as I have had occasion to observe, because if the nasal cavities are obstructed, and respiration has to be carried on through the mouth, the lungs are not sufficiently expanded, and the inadequate oxygenation of the blood gradually lowers the vitality of the system. And finally we see phthisis developed often during the convalescence from exhaustive diseases, such as typhoid fever, diphtheria, and others, if the lung tissue is exposed to an injury giving rise to inflammation.

However both in the inherited and acquired predisposition, it is necessary that an injury should be inflicted upon the lung tissue before the inflammation can be set up. This injury usually consists in exposure to cold—that is a chilling of the surface of the body, but other factors are also frequently the cause of the initial inflammation, as for instance the inhalation of irritating vapor, or of air charged with particles of solid matter, the sucking into the air vesicles of purulent mucous from the bronchioles in

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a state of inflammation, traumatic injury to the chest walls, the formation of gummata in or around the lungs, and others of a like nature. But these causes, are not of sufficient potency to produce phthisis in subjects of vigorous constitution, or cannot produce much destruction of lung tissue if the vitality of the system be elevated.

Thus it will be seen that proper hygienic measures are capable of not only preventing the outbreak of phthisis in subjects predisposed to it by heredity or otherwise, but also are liable to cure phthisical patients in which the destruction of the lung tissue has not gone too far.

If, on the other hand, the process of destruction has gone on for a long time and has involved a large portion of the lung, the system gradually loses more and more of its vitality and finally becomes scrofulous by the narrowing of the lymph-spaces in the connective tissue. When this point has been reached tubercles appear in the affected lung tissue and bring about an early fatal termination of the disease. But be it understood that the low-type chronic inflammation has existed long before the tubercles have made their appearance and it alone, without the intervention of the neoplasm, may cause death.

It is this complication and intermingling of the two diseases which has given rise to the confusion of terms existing in the literature on the subject of consumption, for we find almost everywhere the terms phthisis and tuberculosis used as synonyms.

The laryngeal manifestations of phthisis are so varied and manifold that it is difficult to give a general idea of their clinical features and pathology and it will, therefore, be more comprehensive to describe them seriatim. They are never seen to occur prior to the disease of the lungs, although the latter may be so slight as to escape detection by the ordinary methods of diagnosis, and the laryngoscope then furnishes the earliest evidences of phthisis. Those lesions of the larynx giving rise to subjective symptoms occur quite frequently, that is, in about 33 per cent of all cases, while certain changes in the shape of portions of the larynx and in the color of the mucous membrane, are not noticed by the patient, are seen very early in the disease in the great majority of cases. These latter changes consist in an ashy paleness of the mucous membrane which spreads to the pharynx, palate and mouth and is different from the anæmia seen in other diseases. This pallor usually persists throughout the course of the disease, but there are cases in which here and there spots of heightened color and patches of ecchymosis are seen, usually in those portions of the larynx which are subject to increased and long-continued irritation, such as the free margin of the epiglottis, the inner surface of the arytenoids, the vocal cords, etc. No tumefaction of the tissues, or ulceration, or even inflammation, being present, this condition does not give rise to subjective symptoms, passing unnoticed unless the laryngoscope be used as a means of diagnosis of the lung trouble.

The pathological process in the mucous membrane giving rise to this particular pallor I am not prepared to describe, not having had an opportunity to examine microscopically the tissue of a larynx exhibiting this condition only.

Frequently this anæmia is accompanied by tumefaction of certain portions of the larynx, a swelling which somewhat resembles the oedematous distension of the mucous membrane met with in acute and chronic laryngitis, for which it may be mistaken. The most common seat of the swelling is the tissue around the arytenoid cartilages, extending upward into the ary-epiglottic folds. It thus assumes a peculiar shape resembling a pear, from which resenblance the term "pyriform" swelling has been applied to it. The tumefaction affects either the tissue around both cartilages in an equal degree, that is, it is bi-lateral, or one side is more swollen than the other, and if this is the case, the greatest amount of intumescence is always found on the side of greatest lung implication. These pyriform swellings at times become so large as to interfere with the approximation of the vocal cords, and to encroach upon the lumen of the laryngeal cavity.

Less frequently and usually later in the disease the tissue covering the upper portion of the posterior aspect of the epiglottis also becomes tumefied to a considerable extent, and gives the organ a peculiar rolled up shape resembling in the laryngeal image a grub worm. But the swellings are not confined to the localities mentioned, and may occur in any portion of the larynx. Thus there are cases in which the arytenoid cartilages, the epiglottis and the ventricular bands, and probably also the vocal cords are in such a state of intumescence as to prevent a view upon the lumen of the laryngeal cavity as to necessitate tracheotomy to prolong life. Under the microscope these swellings are seen to be due to an extensive infiltration into the sub-mucous connective tissue of small granular lymphoid cells. The normally numerous glands are also invaded by the infiltration and deposit of a fibrous tissue around the accini and ducts. The lumina of the ducts and of the accini are filled with unusually large proliferated epithelial cells, which, in many instances, have undergone retrograde changes leaving the ducts and accini filled with a granular debris. The peri-vascular connective tissue is considerably increased in thickness and the lymphatics filled with lymphoid cells. A certain amount of serous exudation is also present, which is demonstrated by the fact that a considerable shrinkage takes place in the size of the swellings when the specimen is kept after removal from the body for a few hours before immersing it in the hardening solution. Nowhere are milary tubercles or cheesy deposits to be seen in the tissue. In many cases no other manifestation than these tumefactions are noticed, and in a few instances have I seen the pyriform swellings disappear under the appropriate treatment together with the healing of the affected lung. There is another class of cases in which either no tumefaction of this tissues occurs or in which it is very slight and spread over a larger surface. In these ulcerations begin to appear in various portions of the larynx which are in appearance like the shallow erosions of catarrhal inflammation of the larynx. They usually are situated at the free margin of the epiglottis, in the inter-arytenoid space,

and on the laryngeal face of arytenoid cartilages, less frequently on the ventricular bands, ary-epiglottic folds and the vocal cords

In post mortem examinations I have often found them in the trachea and bronchi and usually occupying in the former that side on which the greatest amount of disease in the lung was found. In the larynx their shape varies with the position which they occupy, being linear on the vocal cords, ovoid on the ventricular band and oval or roundish on the epiglottis. Their tendency is to spread on the surface of the mucous membrane, but not to invade the deeper structures, except where the excretory ducts of glands become involved when a pit-like depression in the bed of the ulcer can be seen. A grayish white, moderately stiff, excretion covers the surface, and they are very sensitive to irritation, giving rise to pain in deglutition and phonation according to their situation. Under the microscope the tissue does not present any marked difference from the picture presented by the tumefactions, except that the small-celled infiltration is more densely crowded around the ulcers and the epithelium at their edges is turbid and granular. When a gland duct is implicated, its epithelium has disappeared and it is seen to be filled with granular debris. The lymph-spaces are occluded by cellular elements near the edge of the ulcer, and capillaries and smaller vessels almost filled with proliferated endothelium.

In other cases still we see projections resembling exuberant granulations in the inter arytenoid space often reaching into the laryngeal cavity, thus interfering with the approximation of the cords and giving rise to aphonia. These neoplasms may remain unchanged for a considerable length of time to be destroyed by the ulcerative process towards the end of the disease, or they may disappear spontaneously like papillary growths on the external integument of the body are prone to do. The only specimen of a growth of this kind which I obtained by evulsion with the forceps, showed under the microscope its epithelial origin, being identical with the tissue of an ordinary papilloma, except that the connective tissue stroma was densely infiltrated with small lymphoid cells so as to be barely distinguishable except by teasing the sections.

These manifestations of phthisis in the larynx remain often unchanged for a long time, or make but little progress as the lung disease advances, or they may disappear altogether under appropriate treatment, even before the disease in the lung tissue has been fully arrested in those cases which terminate in recovery. But as soon as tubercles are deposited in the lungs the laryngeal lesions also develop a tubercular character, and a rapid change for the worse sets in.

The same ætiological factors which give rise to the lung disease, viz., the lowered vitality of the system, the want of histogenetic power of the inflammatory products and the predisposition to inflammation or weakness of the organ also cause the laryngeal implication, and if any injury by cold or otherwise starts an inflammatory process in the laryngeal mucous membrane, it will be of a phthisical type. The con-

tinuity of tissue between the alveoli of the lung and the mucous membrane must also be taken into consideration as an ætiological factor. But I do not believe with some authors that the irritating influence of the expectoration from the lungs can give rise to the erosions or ulcerations seen in the larynx, as it does not become inspissated, and therefore cannot act long enough to destroy the epithelium. These ulcers are rather due to mechanical injuries depriving a small portion of the mucous membrane of its epithelium which is not regenerated. And now let us glance for a moment at the picture presented by the laryngeal lesions in tuberculosis, which has been so admirably delineated by my friend, Dr J. S. Cohen, in an exhaustive paper read before the society a year ago, which I am sorely tempted to quote verbatim, were it not for want of space and time, and I must therefore confine myself to mentioning only the salient points of contrast as they have presented themselves to my observation. The laryngeal lesions in tuberculosis giving rise to subjective symptoms are much more frequent, occurring as they do in about 53 per cent of all cases. The primary deposit of tubercles in the larynx, although not usual nor frequent, has been observed in several cases, one of which came under my own observation. The mucous membrane is usually of a livid red color, which is intensified around the ulcerations. The tumefaction of the tissue is more circumscribed, and occurs more generally in the anterior portion of the larynx. The ulcerations are deeper, have raised and serrated edges and cause often great destruction of tissue. Pseudo papillary neoplasms are never seen, and true miliary tubercles as well as cheesy deposits have been demonstrated in the tissue of the larynx. At the same time, complete occlusion of capillaries and lymph-spaces in the neighborhood of the ulcerations may be seen under the microscope. And finally, the existence of these lesions is but a short one, for they depend upon the deposit of tubercles in large numbers, and rapidly progress toward the fatal end.

As in tuberculosis of the lung or general tuberculosis, laryngeal tuberculosis is due to scrofula.

And now let us briefly consider what pathology has to teach us in the prognosis and treatment of these diseases. Tuberculosis from the start is a fatal disease except in the rare cases in which the deposit of the neoplasms is so limited in number and in which they become encapsulated, the poison being antagonized by considerable power of the histological elements of the tissues and the inflammatory product to form new tissue. Treatment avails us nothing, for I will ask have we time to so improve the general health and to change the anatomical condition of the connective tissue to prevent the ulcerative process and have the resulting inflammation terminate in resolution? Clinical experience answers "No" to this question. All we can do in these cases is to alleviate the suffering and prolong life as long as possible and make it endurable. We can, however, prevent the outbreak of the disease by preventing the formation of the initial infectious material and by changing the scrofulous character of the of patients in early

life And further we can use our influence as medical advisers of families to prevent the intermarriage of blood relations, of syphilitic and of scrofulous persons The prognosis of phthisis on the other hand is not nearly as bad, and we may reasonably hope for recovery if the proper treatment be instituted early in the disease

Since the low type of inflammation is dependent upon a lowering of the vitality from any cause, we must direct our efforts to elevate and strengthen the constitution by proper feeding and healthful exercise in the open air, and prevent the too rapid cell death by the judicious exhibition of alcoholic stimulants Digestion as a rule being impaired we should exercise great caution in giving drugs and especially cough syrups At the same time we must strive to evacuate the alveoli of their contents, which by entering and remaining in the bronchioles irritate the mucous membrane and give rise to the frequent and distressing cough This may be accomplished with marvelous success by forcible inhalations of warm and moist vapors, not under pressure, however, for as has been lately demonstrated the lung tissue is not air tight when undue pressure is exerted upon the alveolar walls for any length of time, and air will enter the blood vessels causing instant death By thus removing the irritant from the bronchial tubes the cough is alleviated much more quickly and more satisfactorily than is possible with expectorants acting through the stomach The treatment of cavities in the lung tissue, as instituted by our illustrious member, Dr W Pepper, and its success by injections and drainage are too well known for me to dilate upon here

As regards the lesions in the larynx, only the mildest possible applications in the mildest possible manner should be employed, for be it remembered that mechanical injury will give rise to the ulcerations, and therefore all harsh treatment with the probang or brush should be avoided

The treatment as thus outlined has proved eminently successful in my hands, as well as in those of others, and I am happy to be able to say that there are numerous cases of cured phthisis in this city at the present time But even the best and most successful treatment is not equal in efficiency to the prevention of the disease, and, as in the case of tuberculosis, we can do far more good by teaching our patients to observe hygienic laws and to elevate the vitality of their system, thus preventing the possible outbreak of the dread disease We should also be very careful to search for and remove any source of irritation which might ultimately produce phthisis

To sum up my remarks, I will state that, in my opinion, *tuberculosis* is produced by infectious material entering the lymphatic circulation which does not originate outside of the body, and that the disease is incurable Further, that *phthisis* is due to a low grade of inflammation of the lung tissue, and is curable in the earlier stages That both tuberculosis and phthisis give rise to laryngeal complications and lesions which are distinct in character, and differ from each other both in their clinical features and in the pathological changes of the tissues And finally, that both diseases, although totally different in their

ætiology and initial pathological lesions, may co exist and produce each other, and that the indiscriminate use of the terms tuberculosis and phthisis in our literature must necessarily mislead the student, and make careful investigation extremely difficult

THE TREATMENT OF PSORIASIS.

BY ARTHUR VAN HARLINGEN, M D

[Read before the Philadelphia County Medical Society, October 17 1883]

Psoriasis is one of the commoner skin diseases met with in this country The statistics of the American Dermatological Association show that it occurs in the proportion of about 6 per cent in all diseases of the skin encountered Daily experience would seem to indicate a still more frequent occurrence, because the affection is a disfiguring and annoying one, and therefore patients are more inclined to seek relief, and also because it is a stubborn disease and greatly prone to relapse The history of a single case will often extend over many years, and bring it under the observation of a number of different physicians

It is because of the comparative frequency with which psoriasis is met and its stubbornness to treatment, that I have selected it as the subject of my remarks this evening Having had a good deal of experience in the treatment of the commoner forms of the disease, it is my intention to confine myself chiefly to the consideration of such remedies as have come under my own observation and use, only touching incidentally on others

The object of treatment in psoriasis is the removal of the eruption as it exists upon the skin We cannot hope with any degree of certainty in any given case to prevent a recurrence of the disease, or, if you please, a relapse For the drug has not yet been discovered which will surely take away all tendency to the recurrence of psoriasis, and whoever promises a cure, in the wider sense of the word, to his patient, will in a very great number of cases find that he has been too sanguine Fortunately, however, a certain number of patients do seem to recover I do not know what has been the experience of others in this respect, but I have patients who have been under observation three, five, even eight and ten years without relapse Such cases are, unfortunately, few

Preëminent among the internal remedies which are useful in the treatment of psoriasis, is arsenic, which may be justly called a specific in this disease I think I am not asserting too much when I say that eight out of ten cases of psoriasis of average character and severity, shall do better under the use of arsenic than with any other remedy I prefer Fowler's solution given in the average dose of four minims thrice daily I think this solution is often prescribed in too large doses, and I am sure the dose of five to ten minims as given in the books, is too large for ordinary use Most patients bear a four minim dose very well, but there are idiosyncrasies I have some times been obliged to limit the dose at the beginning to one minim in cases where subsequently such toleration has been established that twelve minims have been taken with impunity However, four minims

is a good dose to begin with, and if the effect does not begin to show itself within ten days or two weeks the amount may be gradually increased. Fowler's solution should never be given to the patient in a vial with the directions to drop out the requisite number of drops. The patient is apt to make a mistake, vials of different sizes may pour out more or less in each drop, and there is always danger in leaving a half empty vial of poison about the house. The solution is better given mixed with water, or with wine of iron or other convenient vehicle.

The effect produced by arsenic upon the eruption of psoriasis is first, in diminishing the quantity of epidermic scales thrown off, and then in preventing the appearance of new lesions. The patches gradually lose their scabiness, begin to heal in the middle and disappear little by little. It must be remembered, however, that arsenic is a slow acting remedy, and its use should be continued through many months to get the best security against relapse.

The other liquid preparations of arsenic used in psoriasis are Pearson's solution of the arseniate of sodium, and Donovan's solution of the iodide of mercury and arsenic. I have used the former in a few cases without noticing any perceptible difference as regards efficiency between it and Fowler's solution. The solution of mercury and arsenic (Donovan's), I have employed in certain stubborn cases with good effect where Fowler's solution has seemed to fail. The existence of syphilis as the cause of the eruption in these cases having been excluded, I am at a loss to account for the apparently greater efficacy of the mixed treatment. The dose given was as much as ten drops, and although this solution is weaker in arsenic than Fowler's, yet I am inclined to the opinion that the conjoint administration of the two drugs, mercury and arsenic, was the cause of the good result rather than the increased dose. I should be inclined to use Donovan's solution in cases where Fowler's solution shall have failed.

The mixture of arsenious acid, black pepper and sugar of milk, known as Asiatic powder, and recently placed in the Pharmacopœia with the pepper left out, among the triturations, is of no particular value above the other preparations, and it is not so convenient of administration.

Hypodermic injections of solutions of arsenic have been employed in the treatment of psoriasis, but I have had no experience in their use.

Next in value to arsenic in the treatment of psoriasis is iron. I commonly employ the tincture of iron in cases where arsenic does not seem indicated. There is one type of psoriasis which includes robust, rosy, well nourished individuals, "the very picture of health." Such people have never been sick a day in their lives, or perhaps may have had slight attacks of articular rheumatism. Such patients do well under arsenic.

But there is another type in which the individual is thin, poorly nourished and perhaps somewhat anemic. These are the cases which do well under iron, which is best administered in the form of the tincture of the chloride. With these two remedies arsenic and

iron, I usually succeeded in curing ordinary cases of psoriasis, adding in rare cases cod-liver oil to the use of the tincture of iron when debility is present. Of course local applications are employed at the same time. Of these I shall speak presently.

In addition to the internal remedies mentioned, quite a host of others have been employed from time to time. Such are tar, carbolic acid, copal, phosphorus, tincture of cantharides, tincture of nuxia, carbonate of ammonia, acetate of potassium and other diuretics, the alkalies, as liquor potassa and the alkaline mineral waters. Of these I have found alkalies and diuretics useful in cases when a markedly inflammatory condition of the skin has existed. The other remedies I have not employed, nor do I think the reports of their usefulness based on a sufficient number of facts, except in the case of tar, possibly, to make it worth while to try them.

Equally important with the internal treatment of psoriasis is the external management of the disease. It is, of course, desirable to remove the eruption as soon as possible wherever it may be situated, but when it is found upon the face, there is every reason to endeavor its cure by all means and in the shortest time. External and internal treatment should therefore be combined when practicable. The first thing to do is to remove the scales. This may be done by means of local or general baths, wet dressings, etc. or byunctions with fats and oils, by the use of soap, or by the action of impermeable dressings of India-rubber or oil silk. When only a few lesions are to be acted upon, a solution of salicylic acid in alcohol, one part to sixteen, well rubbed in with a sponge, will remove the scales very nicely.

The scales having been removed, the next thing is to apply such substances to the diseased patches as may most quickly modify the abnormal condition of the skin, and bring it back again to a healthy condition.

An innumerable number of applications have been recommended for this purpose, the most of which I shall pass over with only a mention. Such have been soaps and alkalies, citric and hydrochloric acids, sulphur, iodine and mercury, alone and in combination, together with the various forms and preparations of tar, creasote and carbolic acid.

All of these remedies have their uses, and most of them, especially the tarry preparations, I have employed time and again in years gone by, and with moderate satisfaction. The introduction, however, of chrysarobin or chrysophanic acid some six or seven years ago, put quite a new face on the local treatment of psoriasis, and since then, with the aid of this and other later discoveries, we are able to work a much more rapid change in the appearance and condition of the skin in this disease.

As chrysarobin is perfectly well known to all here present, both as to its advantages and defects, I shall say but little about it in the ordinary form of its application, namely as an ointment. When it first came out I tried it quite extensively, but its disadvantages seemed so great that I had already begun to restrict its use greatly in my practice, when a new agent appeared, which for every day use has in my hands un-

til very recently, almost entirely superseded all other local applications. I refer to pyrogallic acid.

I do not think that pyrogallic acid is by any means so well known as an application for the relief of psoriasis as is chrysarobin. If I may judge by the infrequency with which its virtues are mentioned in the journals (although I believe all recent text-books speak of it), it is not in general use. But it is, in my opinion, one of the very best remedies we have for the cure of cases of psoriasis of average severity. Employed in the form of ointment, of the strength of one-half to one drachm of the pyrogallic acid to one ounce of simple ointment, the effect produced by it is almost as rapid and decided as that brought about by chrysarobin, without the accompanying discoloration. A slight blackish staining is all that is produced, and the ointment can even be employed in the scalp without markedly discolorizing the hair, if applied cautiously. It is desirable however, not to apply soap or alkalies at the same time, because this causes a more permanent and deeper stain.

Pyrogallic acid cannot be used in extensively generalized psoriasis, when large surfaces are affected by the disease, without a certain amount of danger from absorption, as indicated by strangury and olive-green or tar-colored urinary sections. With care, however, and the occasional suspension of the remedy for short periods, I believe this remedy could be employed even in universal psoriasis with good effect.

One more external application in psoriasis remains to be spoken of—namely, naphthol. This drug, a derivative of coal tar, was introduced into use several years ago by Kaposi, of Vienna, as a sort of substitute for carbolic acid. He recommends it very highly in psoriasis, in the form of ointment, about eighty grains to the ounce, and I have used it in this and other strengths, and also in alcohol and oil, with fairly good effect.

Naphthol is not so active in its effect as chrysarobin or pyrogallic acid, but it is much more agreeable and is, I think, peculiarly well adapted for employment upon such parts as are exposed to the view, as the face and hands. Like pyrogallic acid, it must be used with caution over large surfaces, as absorption with toxic effects may be produced.

It remains to mention briefly two or three methods of application of these remedies which have recently been brought forward. The first of these is the treatment by medicated gelatine, which was introduced by Prof Pick, the well-known dermatologist of Prague. My attention was first drawn to this by a pamphlet which Prof Pick kindly sent me, in which he gave an account of his earlier experiments with medicated gelatines, but I have not as yet had an opportunity of testing this method of medication as I should desire. I may say, however, that the method does not seem to me calculated to prove convenient and popular in private practice. I had for some time been making some experiments in my service at the Polyclinic in the preparation of gelatines impreg-

nated with chrysarobin and pyrogallic acid, but without much satisfaction, when Dr Chas L Mitchell, the well-known pharmacist of this city, sent me some excellent preparations of his own, which seem to be perfectly adapted to the purpose for which they are intended. A bit of one of these gelatine sticks is cut off and placed in a water-bath, where it soon melts into a clear homogeneous fluid, which may then be applied to the lesions of the skin by means of a paint-brush. The advantages claimed are cleanliness and transparency. The coating of gelatine does not rub off on the clothes, and is therefore not so dirty as an unctuous application. A fresh coating can be painted on every day or two as the old layer wears off. The chief disadvantage of this method of treatment is that it requires apparatus which is not convenient to carry about, nor can the patient be trusted to employ it at his discretion. My own experience is that in psoriasis, at least, the gelatine applications are not active enough. I have not, however, used them with sufficient frequency to pronounce a positive opinion.

Recently a solution of chrysarobin in collodion has been recommended in the treatment of psoriasis by Dr George H Fox, of New York, and several dermatologists have confirmed his statements with regard to its efficacy. I have employed this preparation in one or two instances, but it has seemed to me so much less active than the chrysarobin ointment that I have not been encouraged to continue its use. It has one great advantage over the gelatine applications, however, and that is that it can be applied extemporaneously, and without the paraphernalia which must accompany the use of the gelatine.

A few weeks since a pamphlet by Prof Auspitz, of Vienna, reached me, in which that distinguished dermatologist recommended liquor gutta-percha as a vehicle for the application of chrysarobin. It once obtained a ten per cent solution, or rather emulsion, of chrysarobin in liquor gutta-percha, and happening to have a case of psoriasis of the face and scalp under treatment, I gave some to the patient to apply once daily. The effect was so happy as to encourage me very much to hope that we have in this preparation the most convenient method of applying chrysarobin efficiently, and is chrysarobin, after all, the most efficient local agent in the treatment of psoriasis yet brought forward, I have no hesitation in urging the trial of this preparation on any one who may have a case of psoriasis under treatment. It is to be noted, however, that the same watch must be kept upon the skin for fear of exciting dermatitis as when the ointment is used. Only when the liquor gutta-percha dries, which it does very quickly, there is little or no danger of rubbing the chrysarobin over the good skin, nor is there much danger, if any, of staining the clothing.

BLOOD-LETTING

BY GEORGE HAMILTON, PHILADELPHIA

In the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION for September 22d, is an article entitled "Good Remedies out of Fashion," by Dr C I

¹In a communication read before the American Dermatological Association last month and published in the *American Journal of the Medical Sciences* for October I have given the results of my experience in the use of naphthol in various diseases of the skin psoriasis among the number. I may refer to that paper for further details as to the action of the drug in this disease.

Hare, President of the Metropolitan Counties Branch of the British Medical Association, in relation to emetics and blood-letting

In regard to the utility of emetics in the cases adduced there are probably very many who coincide with the opinions of Dr Hare, while, in reference to the propriety of bleeding in the congestive conditions alluded to, and others of a similar nature, a vast majority of practitioners, including nearly all the younger, would, perhaps, withhold their assent. The signs of the times, however, seem to indicate that a beneficial change of opinion upon this subject is about to occur, and the writer cannot but express his gratification that another distinguished authority has added his testimony in favor of a practice that, abused as it may have been in past years, is likely to assume its true position as an not only useful, but indispensable therapeutic measure in the cases to which Dr Hare has referred. The earnest, impressive injunction of Dr H is that the physician, in the dangerous conditions he refers to, will not lose time in the employ of means wholly inadequate to the emergency, but at once resort to that one measure which, in the practice of the most experienced physicians, has been proven to be more successful than all other agencies combined.

Following the example of Dr Hare, a case in illustration will now be given. A man of 22 years, unusually muscular and strong, after a few hours of chilliness was seized with a most violent and protracted chill, and in a very short time great oppression and stricture of the chest, with extreme difficulty of breathing, ensued. Early the next morning the patient came under my care. He lay upon his back, gasping for breath to such a degree that, if the motion of a fan was suspended for a moment, he would, with difficulty, exclaim, "Fan, or I will suffocate!" Face pallid, tips of the ears and nose cold, the hands, feet and legs in the same condition, the nails livid, the pulse very feeble and frequent. Inexperienced and alarmed, Dr Thomas F. Hewson, my preceptor, was called to the patient, and at once directed me to bleed, but, for several minutes, a few drops only of dark blood could be had, yet by placing the hand in hot water the blood began to flow, and soon changed to a more natural color, the pulse increased in strength and became slower, the pallor and anxious expression of the face were less marked, and the patient said he felt easier. The usual warm applications and a stimulating liniment were applied to the feet, and moderate portions of carb. ammonia and wine were prescribed. The abstraction, however, of the carbonized blood had already produced reaction, and no matter how violent this reaction, or subsequent inflammation might be, this condition would be infinitely preferable to the profound passive congestion that oppressed the heart and lungs, paralyzed the action of the brain and entire nervous system, and thus, momentarily, endangered the life of the patient. Dr Hewson, promising to return in the evening, said that this was by far the most strongly marked case of approaching pneumonia that he had ever seen, and now, strangely enough, after more than a fifty years experience, no such case has occur-

red in the practice of the writer. At the evening visit the whole aspect was changed, reaction was fully established, the pulse excited, gasping greatly diminished, expression of face less anxious. As the oppression of the chest, and now, for the first time, some degree of pain was complained of Dr Hewson, anticipating a severe attack of inflammation, directed the vein to be reopened, from which florid blood bounded out as if from the vein of a man in robust health. The subsequent march of the disease, contrary to what had been feared, was not as severe as some others coming under my notice. To bleed under the condition just stated would perhaps not be thought of by an immense majority of physicians, but would probably be derided or ridiculed, but neither derision nor ridicule can successfully confront irrefutable facts. But some may say in objection. Is it not a fact that the case adduced is, by your own admission and that of Dr Hewson, exceptionally rare, and therefore of little practical importance? In answer, it must be admitted that cases of such violence are seldom met with, but many others, endangering life in a lesser degree, do occur, not only in pneumonia, but in several other diseases, sometimes ushering in the attack, oftener in the latter stage. In the destructive epidemics that ravaged Europe several centuries ago, the deaths would often occur so quickly that it was impossible to refer many of them to the violence of fever or inflammation, whilst the opposite condition, profound venous congestion, stifling, as it were, vitality at the fountain head, would readily explain the fearfully sudden mortality. Again, in the cholera of 1832, many of the slaves in Louisiana suddenly fell victims to the malignant nature of the disease, without the occurrence of vomiting or purging. In malignant intermittent, not very often seen in this country, death may occur so soon after invasion that no rational cause can be given other than that of profound congestion.

Physicians in this section of the country are, fortunately, not often called to cases of this character, but when they do occur the course to pursue is that so emphatically commended by Dr Hare. In this connection the writer may state that nearly all who, for a few years past, have adopted and written upon this mode of practice, are found to occupy distinguished positions as practitioners, authors or lecturers. In a physiological and pathological point of view the cases in illustration, by Dr Hare, perhaps more decidedly the case of the young man attacked with pneumonia, are of extreme importance. In disease, the greater the divergence from the normal physiological state, the more distinct, impressive and instructive is the pathological condition, and when, as in an ordinary case of pneumonia, where inflammation and fever may be violent, the contrast between this and the congestive abnormal is still more marked and instructive. The normal action of the brain, spinal marrow and nervous system depends, entirely upon the stimulus of oxygenated, vitalized blood, and the physician who abstains from the abstraction of carbonized, in fact poisonous blood, must do so in ignorance of the real nature of the case, or from dread of the wide spread sentiment in opposition to bleeding,

both in and out of the profession. Another class of cases of congestion is frequently seen, of an entirely different character, and occur under very different conditions. They are generally noticed in the latter stages of disease, in fever, inflammation, or in chronic affections, and whilst they may exhibit no startling signs of immediate danger, they are, doubtless, the final cause of more deaths than occur in the former class. As a rule, and by common consent, bleeding is totally inadmissible in these cases, unless done in the first stage of the disease, and the strength of the patient yet is unbroken.

It was not the purpose, nor is it within the scope of this paper to enter upon the subject of bloodletting in ordinary inflammation, and especially in pneumonia. The difference, or rather the antagonism, of opinion in regard to the treatment of this disease, and the conflicting statistical reports of success, based upon the use or neglect of the lancet, may not be regarded as complimentary to the profession. Inflammation and its attendant fever does not occur without a cause, a noxious agent, and hence, such inflammation and fever must be regarded, in tendency, at least, as conservative, and so long as inflammation does not become so violent as to threaten the integrity of tissue, and organs essential to life, there would appear to be no necessity for the abstraction of blood, whilst in cases of great intensity, unless reasons of special, imperative character forbid, blood should be taken at the earliest moment, and to such extent as the constitution and existing conditions will admit. The danger so often spoken of in opposition to bleeding sinks into insignificance compared with that resulting from intense, unrestrained inflammatory action. The ability of the constitution to bear great loss of blood is exemplified in the fearful condition to which women in abortion, or post-partum, are at times reduced, and from which they often recover with marvelous rapidity.

CATHETER BROKEN OFF IN PROSTATIC PORTION OF URETHRA--EXPEDITIOUS REMOVAL

By ARTHUR L. WORDEN, M.D., DES MOINES, IOWA

I notice, in your issue for Sept. 15, the paper of Dr. Hard, in which he recommends a sharp, screw-pointed instrument for removing broken catheters from the urethra. This cut represents an instrument which once helped me out of such a difficulty without the patient even knowing what had happened.



I had occasion to pass a soft rubber catheter, No. 11, into the bladder of a colored man. After drawing his urine and attempting to withdraw the catheter, imagine my dismay at having it break off in the prostatic region. Without mentioning the fact, I immediately passed the urethral forceps, and easily securing a grasp upon the broken end, at once withdrew the fragment entire.

On another occasion, I was unfortunate enough to have a pledget of absorbent cotton slip off my applicator and remain in the cavity of the uterus. Again my alligator urethral forceps came to my rescue, and I removed the foreign body without difficulty. The blunt end renders it as easy to introduce as an ordinary silver catheter. The cut represents the mechanism by which the greater part of the instrument works by a sliding motion, which in turn opens and closes the short alligator blades. With this instrument a firmer hold may be secured, and the fragment is not so liable to break. The compound silver catheters sometimes break off, and may be easily removed by the forceps—whereas the screw would be entirely useless. The greater safety of the former is obvious.

MEDICAL PROGRESS

Cepis

THE ACTION OF THE CONSTANT CURRENT IN ELECTRICITY APPLIED TO THE BRAIN ESPECIALLY AS CONCERNS THE EYE.—Dr. Gillet de Grandmont in the *Recueil d'Ophthalmologie* (August) after a series of experimental researches, reviews this subject at considerable length. In using this means for the relief of eye affections, he places the negative pole on the forehead near the termination of one of the branches of the tri-facial nerve, while the positive pole is placed near the superior conical ganglion of the sympathetic. The impression produced shows itself in various ways, viz., by flashes of light which are indicative of an irritation of the optic nerve and a corresponding disturbance of the retinal elements, and serves as a means of diagnosis to determine the degree of alteration of the retina. When, for example, an amaurotic does not see the brilliant blue light, but a feeble yellow glimmer, the prognosis would be far from favorable. The metallic taste in the mouth is not so easy of explanation, it has been supposed to be the result of a dialytic action upon the saliva, the iron taste has been supposed to be due to the decomposition of the elements of the blood containing iron, but this does not explain the copper taste. It is evidently due to a direct excitation of the lingual and glosso-pharyngeal nerves. The buzzing is due to an excitation of the auditory nerve. The dizziness is the result of a congestion of the encephalic centers. This appears only when the current is very strong, or when it is prolonged, and is very objectionable. Another objection to these strong and prolonged currents is the cicatrices which result on the forehead and neck from the destruction of tissue. The lowering of temperature which is shown on the use of a moderate current of electricity of short duration seems to negative the foregoing statement of congestion of the encephalic centers by a strong and long continued current, but this is explained by the action on the sympathetic and consequently upon the vaso-motor nerves. A current of feeble intensity stimulates the vaso-motors to the contraction of the vessels and lowers the temperature. A current of greater intensity or long continued exhausts and overcomes the excitability of the vaso-motors, and there is a vascular relaxation which admits of turgid-

ity and distension, congestion and sometimes even rupture of the vessels. An electrolysis also takes place in the aqueous humor, possibly also in the vitreous humor and in the crystalline lens, similar to that shown in the decomposition of water, when oxygen passes to the positive and hydrogen to the negative pole. This accounts for the direct diminution in amount of the aqueous humor, diminution in mass of the vitreous humor, and alterations in the crystalline lens, the latter being deprived of a portion of its water and showing a segmentation bordered by opaque lines.

The conclusions drawn are in effect that continuous currents applied to the more profound affections of the eye are of great use in therapeutics, that they act upon the circulation of the ocular globe, and that they act powerfully upon the secretions of the humors of the eye. They are useful wherever it is desirable to influence the retino-choroid circulation, to stimulate the nervous excitability of the retina, or to modify the secretion of the vitreous body. That is to say that atrophy of the optic nerve, glaucoma and chronic irido-choroiditis can be so relieved. As regards the strength of the current the greatest benefit was obtained from using 4, 6 or 8 Lechanché's elements of medium size. Whenever a larger number of elements were employed cerebral disturbance always followed without a corresponding benefit in the affection itself. A descending electric current applied for from four to five minutes once on twice a week, sufficed to give satisfactory relief. Strong or long continued currents are useless and dangerous in producing indelible cicatrices and in producing congestions of the brain. Dr. Gillet de Grandmont has never been able to obtain any important modification by this means in confirmed cataract.

EVERY PATIENT HIS OWN CASE BOOK.—Dr. Howard A. Kelly tells us, in the *Medical News* for October 13th, that he has for more than sixteen months, while a resident in the Episcopal Hospital, been in the habit of mapping out on the superficialities of the body, in an indelible aniline color, the results of a physical exploration of the condition beneath. The markings remain fresh and clear from one to several weeks or longer, profuse sweating being the only symptom that is apt to obliterate them. He uses abbreviations to designate certain physical signs, the day and month being also recorded. The markings are made so prominent as to be legible over the largest of our clinical amphitheaters. This suggestion by Dr. Kelly may be enlarged upon to a very considerable extent. The clinical professor, it is true, would not have the opportunity of showing how a close and careful diagnosis is made, but he would be able to show a much greater variety of cases and have all his patients arranged like diagrams around him. In fever patients the daily record of the thermometer could be placed with the date on the borders of the wallary space, on the notes, or elsewhere, according to the mode of using it, what might be better still for this purpose, lines might be drawn in these situations to give the variations in the curve from date to date. Then in skin diseases isolated points might be ornamented by recurring

areola of boundaries and dates to indicate progress from papular to vesicular, pustular, maturative, etc., etc. Many a poor fellow would like to have a boundary to his phagedenic chancre to know if the thing is still spreading, or if it has begun to yield to treatment. Finally, it would give food and thought to the mind of the patient himself, too often left to its own resources. We hope these comments upon Dr. Kelly's suggestion will not be received amiss, as really he has given us what may be of great value within certain limits, but at the same time it does provoke one to thoughts irrelevant.

TEN CASES OF POISONING BY CANNED MEAT.—The *Archives de Médecine de Pharmacie Militaires* for August 15th gives the report of the surgeon accompanying a company of a French regiment on the march in the East, where ten boxes of conserve of bouillie beef were opened for distribution, each box being served to ten men, making each man's ration one hundred grammes of the viand. The corporal in charge of the distribution found that in one of the boxes, while there was no bad odor in place of the firm jelly overlying the meat, there was a white slightly viscous fluid, as if the jelly had liquefied. This he threw away, only giving the meat itself. One hour after the meal the ten men who partook of it were all taken ill with nausea, alimentary and bilious vomiting, vertigo, violent colics followed by diarrhoea, the stools being foetid and spumous, marked cramps in the thighs and legs, lasting four or five minutes, making all movement very painful. These patients were transferred to a hospital suffering from intense frontal headache with a sensation of throbbing at the temples. No heat of skin or febrile movement, pulse weak and slow but regular, respiration normal, abdomen slightly sensitive to pressure, urine scanty, cloudy, loaded with urates, but neither sugar nor albumen. The following day the symptoms were much less marked, cephalgia and want of appetite remaining, more of the patients were able to get up and walk about, the third day the symptoms had all disappeared and the fourth day they all reported for duty.

These men had eaten only of the canned meat and their usual bread ration, they had drunk coffee, no alcohol, and water of a good quality, none of their comrades had suffered in any way. The preparation of the canned meats had been recent—June, 1881—and the date of poisoning was January 13, 1882, not more than seven months. The ten boxes or cans were carefully examined, one of them had a peculiar and decided fishy odor, like sardines in oil, while all the others gave the healthy odor of meat fat. This can was recognized by the corporal as having contained the offending substance. There remained a little of the jelly and meat at the bottom of the can, the jelly had a sharp, disagreeable taste, the meat though insipid was edible. The can itself showed nothing out of the way—no fissure, the solderings were intact, and the interior showed the brilliant metallic lustre of tin. There was a careful analysis made of both the jelly and meat, but it revealed nothing. The microscope was not used.

report made was to the effect that these preparations could undergo a change which, without modifying either the appearance, color or taste of the viand, would endow it with toxic properties, and the only sign existing was the fishy odor on the sides of the can, the simple liquefaction of the fat not being indicative of any change in the viand itself

ON THE USE OF SALICYLIC ACID IN PRESERVING ALIMENTARY SUBSTANCES —Prof Bronardel (*Annales D'Hygiene Publique*, Sept) has made a report on this subject in which he has embodied some very useful information. In 1880 the Consulting Committee of Public Hygiene in Paris concluded that salicylic acid was a dangerous substance, the sale of which should be submitted to the same laws as govern the sale of other dangerous substances required toxic doses to make it available, therefore, the sale of such preparations should be interdicted. These conclusions were adopted by the Minister of Agriculture and Commerce who accordingly issued a circular interdicting the use of salicylic acid in this way. His circular called forth so many protests and gave rise to so much discussion, that the subject was again referred to this committee, resulting in this report of Prof Bronardel.

The role and the mode of action of salicylic acid and of its salts in the animal economy is very little known. We who, as physicians, prescribe it daily, recognize its good effects in certain diseases, but we are incapable for establishing a theory for its action. We know that once introduced into the system it is eliminated by the liver and by the kidneys. The most partisans of this agent all recognize that diseases of these organs contra indicate absolutely its administration. All have cited examples of sometimes mortal accidents, where the liver or the kidneys have failed to perform their duty as emunctories. In such cases the salicylic acid, not being eliminated, or being eliminated imperfectly, has accumulated in the system, and the dose prescribed each day has been added to its fellows. The elimination differs with the age, it is rapid in infancy and adolescence, slow in old age. Dr Chauvet has shown that in the old people the elimination of a single dose of 4 grammes is not complete earlier than six days after its ingestion. Even when elimination is normal, the salicylic acid does not pass through the system without undergoing some transformation, we find salicylic and salicyluric acid in the urine. According to the searches of Feser and of Friedberger we find in the urine only 63 per cent of the salicylic administered to dogs, and none in the feces. Prof Bronardel dissolved in table wine at meal time for twelve days to three persons in good health, one aged 68 years, the second 46 years, and the third 23 years of age, all three being submitted to the same alimentation. With the salicylic or salicyluric acid in the urine. With the eldest, the violet color appeared slightly on the fourth day, then increased, and was quite intense for four days after the use of the drug had been stopped, and did not completely disappear until the seventh day.

So, administered even in small doses (20 centigrammes per day), the salicylate of soda does not undergo the same transformation in all persons, and in many it remains in the system for an indefinite period, which variation renders it impossible to indicate, even for persons in health, a minimum dose.

Many persons are exposed to serious danger by the daily use of salicylic acid or of its salts even in relatively small doses. These are cases where there is no elimination, or where the elimination is incomplete, from senile alteration of the kidneys, or from nephritis with albuminuria. Hospital records show that the frequency of albuminuria has more than doubled during the last twenty years. It is true that many cases of albuminuria are relieved, as in pregnancy where the presence of albumen is but temporary, and men have lived for fifteen years and longer after albuminuria has been detected as a prominent symptom. In view of these facts, Prof Bronardel advised a maintenance of the laws prohibiting the use of salicylic acid or its compounds in the prevention of alimentary substances.

EXTRACTION OF A POMMADE POT INTRODUCED INTO THE RECTUM —M Maurice Pollosom (*Syon Medical*, Sept 16), extracted a vessel of this description from the rectum of a man aged 72 years, who said he introduced it for the purpose of relieving pain in that region by pressure, and that it passed up and beyond his control. It had been in place for fifteen days, he had received medical advice but no examination had been made, and medicines had been given by the mouth, fecal matter passed in liquid form around the vessel. The borders of the vessel could be readily felt with the fingers and traction made upon them, facilitated by a depression about a centimeter in length upon the border of the vessel, but rendered difficult from the fact that a piece had been broken off before its introduction. The sphincter also was very dilatable, indicating that this was not the first introduction of a foreign body. The muscular contractions of the rectum were very powerful and offered serious resistance, and the mucous membrane bordering on the rim of the vessel when pressed aside in one place doubled over the rim in another. Two pairs of forceps were applied at the broken portion, and while the mucous membrane was pushed away from the rim, traction was made and the vessel extracted. Slight hæmorrhage ensued but there was very little tearing of the mucous membrane. A large ball of fecal matter followed the extraction. The foreign body was an old glass pommade pot, cylindrical, six centimeters in length with a diameter of 47 millimeters, channeled externally, the broken portion represented one-fifth of the circumference. At eight millimeters of this circumference there was a circular projection of two millimeters which was very favorable for traction, and the projection was broken for one centimeter of its length. The patient was immediately relieved and left the hospital in thirty-six hours.

ON THE ACTION OF FREE HYDROCHLORIC ACID IN STOMACH DIGESTION —Dr N Vogt has an interesting review of this subject in *Le Progres Medical*,

September 15 As German writers of recent date have considered the absence of this as a free acid of great importance in semiology, Dr Von den Velden by means of Kussmaul's pump obtained a certain quantity of matters contained in the stomach during digestion, and submitted them to the different reagents in order to detect the free hydrochloric acid. He obtained in tropeoline a substance of yellow color, which became red in the presence of mineral acids—organic acids not affecting it. In a case of typhus (?) he observed the disappearance of the free hydrochloric acid throughout the disease to return during convalescence. In simple dilatation of the stomach it was never wanting. In carcinoma it could not be detected. This could not be attributed to simple debility, because patients who, without carcinoma, had arrived at the last stages of marasmus still preserved the hydrochloric acid. It could not be the result of chemical action on the part of the cancerous secretions, because the light cases which were observed were cases of scirrhus and not ulcerated. In one case Dr Von den Velden diagnosticated carcinoma in the absence of all other symptoms, which diagnosis was confirmed by the autopsy. In another case where all the symptoms of a neoplasm were present, the presence of the hydrochloric acid indicated that it was not carcinoma, and the autopsy confirmed his opinion. In one case where the liver was affected and the stomach healthy the acid was present.

In his researches he determined that the saliva which had passed into the stomach mingled with the food, did not act upon starch when free hydrochloric acid was present, and that this acid did not make its appearance for one and a half to two hours after the ingestion of food, thus confirming Lehmann's experiments. Consequently, he distinguishes two periods in stomach digestion: the first where the saliva continues to exert its influence over the starchy substances, and the second coincident with the appearance of free hydrochloric acid when the peptones are found in quantity.

These views have been combated with vigor. Ewald affirmed that the action of the reagent was masked by the presence of the albuminates of blood, etc., that in a number of cases of carcinoma, the reaction of the hydrochloric acid was present, that the two periods of stomach digestion did not exist, and that the diastasis was simply diminished and not suppressed when the gastric juice became acid.

Von den Velden replied that the chemical agents of Ewald were not pure, that he did not admit a specific action to carcinoma, but he wished to discover in what special cases there was an absence of the acid.

Dr Edinger confirmed the disappearance of the acid in two cases of amyloid degeneration of the mucous membrane of the stomach, and was inclined to consider it as due to an obliterating endarteritis of the mucous arterioles. In his experiments he substituted for the Kussmaul pump, a modification of the old process of Reimur—by enclosing a bit of sponge the size of a nut in a gelatine capsule, suspending it

by a thread, to be swallowed by the patient. In 30 minutes the capsule having been digested, the sponge was drawn out and the juice expressed from it and examined.

Dr Uffelmann prefers the violet of methyl as the reagent to determine the presence of the hydrochloric acid. Dr Edinger criticises this and prefers tropeoline. Sassesky has found, in nine cases of fever, that the hydrochloric acid disappears when the fever is accompanied with dyspepsia.

Dr Vogt, in concluding his article, recommends a series of researches of this character to be conducted in hospital service.

INTESTINAL OCCLUSION DUE TO A BILIARY CALCULUS WEDGED INTO THE RECTUM (*Le Progrès Médical*, September 15)—This occurred in a woman 50 years of age admitted to the service of M. Vulpian, at the Hotel Dieu. She died six hours after admission, the clinical history being very incomplete. There was great debility, feebleness of mental powers, facies expressive of suffering, temperature normal, pulse small and low, abdomen tympanitic, very much distended, the intestinal folds impressed on the abdominal walls, and pain on pressure of the abdomen. Marked dyspnea and the patient declared that for four days the bowels had not been moved and very little urine had been passed. Catheterism found the bladder empty. On post-mortem examination all the intestinal folds were found to be distended, the distension extending to the superior portion of the rectum. At the junction of the superior and middle portion of the rectum a regularly shaped hard body was felt through the walls of the intestine, which was so wedged in as not to be moveable. On opening the rectum this was found to be imprisoned by the intestinal mucous membrane, which was tumorified, but not ulcerated. The body was cylindrical in shape, $2\frac{1}{2}$ centimeters in diameter and $1\frac{1}{2}$ centimeters in height, it was composed of cholesterol. The whole of the large intestine was filled with fecal matter and two little calculi of cholesterol were also found. The gall bladder adhered to the transverse colon, where there was a very large ulceration putting the two cavities into direct communication. The ductus communis choledochus was little larger than normal, but contained no calculi.

THE ETHER HABIT —Under the title of "Etheromanie," Dr Sedan (*Gaz des Hôpitaux*, Sept 15) gives some general references to the case of a young man, who, from the text, must have been nineteen years old when the observations were recorded, and who was for nine years in the habit of taking duly between 100 and 1,000 grammes of ether. When first seen by Dr Sedan he was ten years of age—anæmia with a souffle accompanying the first sound of the heart, preserving nevertheless a very satisfactory general condition. He became one of the most promising students of the Lyceum, of a quick and brilliant intelligence, laborious and working with success. He confided to Dr Sedan that he drank ether and that was the secret of his success—reasoned like a man and promised n t plant ex

cept to assist the efforts of his intelligence. From that time he commenced increasing amounts of ether 20 to 30, 50, 80, 100 grammes a day, and as much at night in vapor, not drinking, not eating and leaving his ether intoxication to work out the most difficult questions in the higher mathematics. Getting up at night to obtain ether from pharmacies and imploring his parents to obtain it for him, medical advice failed to break up the habit. He consumed 900 grammes in one day, for the most part by the mouth. He has been said to have taken as much as one liter. And so this puny youth with a very feeble constitution indulged himself to this extent without any immediate disturbance, dying of mitral insufficiency which had developed itself gradually during a considerable period of time. During the last year of his life he used both ether and morphia subcutaneously.

THE CONSUMPTION OF HORSEFLESH IN FRANCE —

The municipal statistics of the city of Paris show that in 1881 the Parisians consumed 9,300 horses, and 400 asses or mules, which amounts to about 2,000,000 kilogrammes of meat. This animal is essentially herbivorous, and no noxious element is elaborated in its animal economy, whilst its organic resistance to disease is such that out of 3,000 horses which were cut up, M. Pierre, a well-known veterinary surgeon, did not find one in which the viscera showed any trace of morbid lesions. Like veal and young beef, the flesh of a young horse is white, and its nutritious qualities are in direct relation with the age of the animal which furnishes it, but when the colt is three years old, its meat, already deep colored, is very nourishing. When the horse has attained full age its flesh contains, in a maximum quantity, all the nutritive principles which are necessary. Liebig and Moleschott have pointed out that horseflesh contains more creatine—that is to say, more albuminous matter—than ox-beef, which makes it largely nourishing. It has, in fact, been demonstrated that four kilogrammes of horseflesh are as nourishing as five kilogrammes of beef. The color is not displeasing, nor is the smell unpleasant, and its use in the treatment of diseases for which raw meat has been recommended, does not present the inconveniences which are often met with in the raw flesh of beef or mutton, in fact, every day large numbers of oxen, cows and sheep are killed which are known to be diseased, and of which it is feared to lose the sale. This can never be the case with regard to the horse, for most horses used for food are sent to the slaughter-house simply because they have become old or incapable of working, or because some accident has disabled them.—*British Med Journal*, Sept 15

METHOD OF RELIEVING THE IRRITATION CAUSED BY CONTACT OF THE EYELASHES WITH THE EYEBALL IN SIMPLE OR SENILE ENTROPION.—Dr Charles Bell Taylor has a wood-cut in the *Lancet* of September 29, illustrating a steel clip which seizes the eyelid in such a manner as to at once relieve inversion, and he affirms by wearing the instrument a short time the patients are frequently cured.

SYMPTOMS OF CHRONIC CEREBRAL HYPEREMIA PRODUCED BY A FOREIGN BODY IN THE AUDITORY CANAL.—Dr Pasquier, in the *Bulletin Medical du Nord* (August), describes the case of a peasant woman 50 years of age, robust, free from previous disease, still menstruating, but not as regularly as previously, who complained of habitual pain in the head increased by noise, heat or bright light, making all work painful. It was accompanied by painful pulsations in the forehead. There was insomnia, and sleep troubled by fatiguing dreams, also a ringing in the ears, but the most troublesome symptom was vertigo, sometimes so intense as not to allow her to stand up, and accompanied with nausea and almost complete loss of consciousness. She felt this for the first time, she said, one day when an insect entered her ear, six weeks before. She thought the sharp pain experienced at the moment might have been the cause of the trouble, but the insect did not actually get into the ear, immediately after the accident a wing was taken out and the rest followed. Audition was good.

The physician who had attended the patient, treated her for cerebral congestion with mustard foot-baths, repeated purgatives and blisters, without benefit.

The auditory canal showed nothing abnormal. The anterior portion of the tympanum had undergone no appreciable modification, but back of the handle of the malleus, directly parallel with it and descending to the postero-inferior quarter of the tympanum, was a grayish, elongated body, presenting bright facets. It seemed to be directly attached to the membrane of the tympanum. The handle of the malleus and the neighboring tympanic membrane were also markedly vascular. Dr Pasquier took this to be the elytra of an insect and tried to extract it by injections of warm water without avail, introducing the speculum anew, he found, at the bottom of the auditory canal a slender prolongation of a shaggy appearance which he took to be a part of a leg of the supposed insect, removing it with the forceps he found it to be an oat-grain, still covered in part by its numerous membraneous envelopes. The symptoms detailed completely disappeared on the extraction of the oat-grain.

BARNEY, JOHN W., M.D., was born in St. Johnsbury, Vermont, January 19, 1816, and was educated at the Caledonia Grammar School. He then read medicine, graduating at Woodstock, Vermont, in 1841. Afterwards, as this college was discontinued about 1860, he received an honorary degree from Dartmouth Medical College in 1873. He located in Lancaster, N. H., where he was in active practice until 1870, when he removed to Concord, remaining there until his death, March 4, 1883.

He was a member of the New Hampshire Medical Society, also a member and an ex-president of the White Mountain Medical Association, from which he was a delegate to and became a member of the American Medical Association in 1865.

G. P. CONN, M.D.

THE

Journal of American Medical Association.

PUBLISHED WEEKLY

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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THE PEDICLE IN OVARIOTOMY

Only a few years ago the operation of ovariectomy by abdominal section was considered one of the most difficult and hazardous of the capital operations. Except in the hands of a few experienced operators the mortality was so great that many were reluctant to admit the operation to the field of practical and legitimate surgery. Now, however, ovariectomy has been so greatly simplified and improved that it is one of the most satisfactory in results of all the more important surgical procedures. While the great change which has been wrought in the status and application of this operation is in great part due to those improvements which have so extended the field of abdominal surgery generally, much is attributable to the improved method of treating the pedicle. It is on this feature of the operation—the treatment of the pedicle—that such diversity of opinion and practice has been current, and to which we will direct attention.

When McDowell performed the first ovariectomy in 1809, he secured the pedicle by a ligature, and drew the ends through the lower part of the abdominal incision, leaving them outside in closing the wound. When Dr. Nathan Smith operated in 1821, the vessels of the pedicle were ligatured, the ligatures severed close to the knots, the pedicle returned to the abdominal cavity, and the wound closed completely. At a more recent date the ecraseur, the actual cautery and the galvanic-cautery were used for dividing the pedicle, and the intra-peritoneal method was followed until Mr. Hutchinson, of London, introduced

the clamp. By means of this instrument the pedicle was brought out between the lips of the abdominal incision and became extra-peritoneal. This method was at once adopted by Wells in England and Atlee in America, and has been the popular and most generally accepted method. While Clay, of Manchester, and several well-known German operators adhered to the intra-peritoneal method, the clamp became famous in consequence of the brilliant results of Wells, Atlee and others. In the meantime torsion and Mincey's method of enucleation were applied in the treatment of the pedicle, the latter being applicable only to special cases. With the advances steadily made in the various details of the operation by the able workers to whom it was entrusted, the mortality was reduced year by year. Among the noteworthy improvements should be mentioned the influence of the Listerian method of treating wounds upon the success of the operation. The greatest interest, however, continued to center upon the management of the pedicle. It was urged by Mr. Spencer Wells that the pedicle when ligatured and dropped into the abdominal cavity would slough off, thereby leading to a fatal result. In his work on Ovarian Tumors he gave conspicuous place to a fatal case in which an examination revealed the distal portion of the stump attached to a coil of intestine and lying in a pool of pus. The intra-peritoneal method had an able advocate in Dr. Tyler Smith, in England, and a brilliant exponent in Dr. Keith, of Scotland. In America the clamp was adopted very generally. In 1868, Spiegelberg and Waldeyer, of Breslau, made experimental investigations upon the changes which occur in the stump of the pedicle after its ligation and return to the peritoneal cavity.

By these experiments it was shown that the distal end of the stump does not die, but its vitality is maintained through its connecting band underneath the ligature until the sulcus made by the ligature is bridged over with lymph, and vascular connection permanently established. In 1872, Dr. Bantock, of London, exhibited to the Obstetrical Society the stump of an ovarian tumor from a patient who died from cancer one year after double ovariectomy had been performed upon her. On examination the hempen ligature was found to have been almost completely absorbed, the knot only remaining as a hard body about the size of a hempseed and covered. In a paper recently read before the American Surgical Association, by Dr. J. Ewing Meigs and Morris Longstreth, of Philadelphia, the results of extensive experiments upon the lower animals relative to the intra-peritoneal treatment of the pedicle were given.

These experiments cover the essential points observed by Spiegelberg and Waldeyer, and demonstrate some important facts bearing upon the choice of material for ligature. This subject is at the present time under investigation in the hands of Drs Mears and Longstreth, and additional observations will be reported.

After Dr Keith, the intra-peritoneal has doubtless been advanced in popularity most by Mr Lawson Tait, of Birmingham, who has won the highest distinction by his skill in this department of surgery. Adopting almost exclusively the intra-peritoneal method of the ligature cut short, his results are shown in a published table of 101 consecutive cases of ovariectomy with three deaths. Mr Wells, we believe, still adheres to the clamp, but in America the intra-peritoneal method has been very generally adopted, and the improved results show this to be one of the greatest advances in abdominal surgery. By the clamp the pedicle is drawn out of the wound and exposed to suppurating inflammation. It has been shown that pus is conducted along the pedicle into the abdomen, and thereby begets suppurative peritonitis. It seems that the prediction made some years since by our distinguished countryman, Dr T. Addis Emmett, that the intra-peritoneal method with the ligature is destined to be the method of the future, is almost verified.

ETHICAL ADVERTISING

DR N S DAVIS

Dear Doctor—I wrote you some days ago asking you to what extent and in what manner a physician might advertise himself under the Code of Ethics.

Your polite answer referring me to certain sections of the Code was duly received. In looking over the sections referred to I find that specialists are subject to the same rules as other members of the profession, and yet I find that in addition to the professional card of a physician, he may add thereto practice limited to diseases of such character as he may choose to designate, or he may say that he devotes certain hours of the day to certain specialties.

Now, does the Code say *to whom* a physician must hand such professional cards, or in what quantity or manner they may be distributed? Or, to be more explicit, does the Code intend to convey in letter or spirit that a doctor can print such a card and circulate it among the people for the purpose of increasing his business or does it mean that he must scrupulously conceal the cards, and only now and then quietly and unobtrusively hand one to a brother doctor?

Furthermore, I would ask if a physician be allowed the privilege of printing and circulating such cards (and it is well known what cards are printed for) can not he, with equal right, print the same card on his letter heads or put the same in medical journals, or for that matter, in the secular papers?

I am well aware of the fact that there is a clause in the Ordinances of the Code, which says, "*Resolved*, That private handbills addressed to members of the medical profession or by cards in medical journals calling the attention of professional brethren to themselves as specialists, be declared in violation of the Code of Ethics of the American Medical Association." And yet I can point you to day to members of the American Medical Association who are guilty of this very thing, only in a different and modified form.

I refer you to a number of prominent men who are daily advertising in the various medical journals as *specialists* and calling the attention of their professional brethren to their facilities for treating special classes of diseases. In a journal now before me, I find a certain "Sanitarium" "for the treatment of nervous and mental diseases, and those addicted to opium and alcohol habit." It is further announced that "Years of experience, personal supervision, trained nurses and ample appliances, are the basis of our success." Two doctors sign their names to this "ad."

Following this advertisement comes that of another sanitarium, with about the same announcement, one physician being responsible for this.

Turning over I come to another "Private treatment of" a certain class, by a well-known physician and a member of the American Medical Association. This gentleman announces himself as devoting special attention to a certain class of cases, and states that he has had years of experience.

It is needless for me to go on. Sanitariums, private homes, retreats, and every conceivable invention is used for the purpose of advertising, and this advertising is done for the purpose of influencing patients into the hands of physicians who are doing this advertising. I do not condemn it, on the contrary, I want to do something of the same kind myself and for the same purpose.

I only submit these questions to you, my venerable and honored brother, for you to give me some light on the subject, and if such a course is proper and ethical in either of the several instances alluded to, depend upon it, I shall appear in due time as a vigorous advertiser. I can name my house a "private home," or a "sanitarium," and add in my proclivities and facilities for treating my specialties, and I will make money by the operation. By the way, please write me privately what you will run a two-inch card in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION one year for. Very sincerely yours,
C. A. BRICE, M. D.

We copy the foregoing letter in the JOURNAL as designed by its author and although the more important questions contained in it are as plainly answered in the editorial on the same subject in the 17th number of this journal as they can be, yet some further comments may not be unprofitable. First, the writer, in the beginning of his letter, fails to recognize the distinction between the provisions of the National Code of Ethics, and the reports and

resolutions adopted by the American Medical Association from time to time, relating to ethical subjects. Yet the distinction is an important one. The National Code proper was framed by a committee appointed by the same Primary National Convention of delegates from Medical Societies, Colleges, and other permanently organized medical institutions, that appointed another committee to prepare a constitution and by-laws for the formation of a permanent National Association. Both committees reported to the same adjourned Convention in which was gathered a more full representation of the several State and Local Medical Societies and colleges from all parts of the country. Both reports were adopted after full consideration, and the National Association created by the one, immediately adopted the other constituting the Code, and made its adoption by all other Societies one of the conditions of eligibility for membership in the National organization.

The Code of Ethics, therefore, possesses all the qualities of a fundamental or organic law created by national professional authority, and cannot be properly altered, amended, or added to, without such amendments or additions having been proposed in due form, and adequately published for at least one year before final action on them, and then such action could properly be taken only by a representative National organization, or, in other words, by the American Medical Association itself. But the resolutions concerning specialists reported by a committee and adopted by the Association in 1869, and the report of a committee on the propriety of a revision of the Code of Ethics adopted in 1874 are simply expressions of the views of the Association, and while they remain unrepealed may be regarded as authoritative interpretations or declarations, yet are subject to modification or repeal at any subsequent meeting by a majority vote.

And yet the language of the letter shows that its author, when he alludes to "certain sections of the Code," is actually referring to portions of the resolutions of 1869 and of the report of 1874, which were given in the leading editorial in the preceding number of *THE JOURNAL*. When he says "I find that specialists are subject to the same rules as other members of the profession," he is referring to one of the resolutions adopted in 1869. When he adds, "Yet I find that, in addition to the professional card of a physician, he may add thereto, *practice limited to diseases of such character as he may choose*, or, he may say that he devotes certain hours of the day to certain specialties," he is referring to a part of the report adopted in 1874. But in this latter reference

he commits an important mistake. There is nothing in the report alluded to which authorizes the physician to advertise by card or otherwise "that he devotes certain hours of the day to certain specialties." Neither does the Code of Ethics proper make any allusion to specialties or specialists in the sense in which those words are now used, and for the obvious reason that neither had any existence in this country when the Code was framed. It is plain, however, to every intelligent reader, that the national Code of Ethics recognizes no privileged or distinct classes in the profession, but that all regularly educated physicians enjoy the same privileges, and are under the same obligations to each other and to the community.

In regard to advertising, *all* are prohibited from issuing handbills, advertisements or private cards inviting the attention of those laboring under particular diseases. On the other hand, no one is prohibited from publishing or using a professional card as freely as he likes, simply announcing himself as a Doctor of Medicine, and giving his residence, office, and office hours. If, through ill health or other cause, he desires to limit his professional business to certain hours in the day, he can specify those hours on his card. Or if he desires to limit his practice to the treatment of any particular diseases he can say on his card that "*his practice is limited*" to this or that class of diseases. For the reason that these are in the nature of self imposed restrictions, and not in any sense assumptions of special or superior professional attainments in certain directions. And if it should happen that some part of the community draw the inference that because Dr. A. limits his practice entirely to diseases of women, that he would be the more skillful in that particular direction, this possible advantage is balanced to his neighboring practitioners by his public notice that he attends to no other class of cases. But if a physician puts upon his card or advertisement that *certain hours* are devoted to some special class of diseases, or that he gives *special* attention to certain diseases, or that he is an oculist, gynecologist, etc., he both asserts a superiority over the general practitioner in the special direction indicated on his card, and implies to the public that all well educated physicians are not prepared to do good work in the same direction, and yet he gives no assurance, either to the public or the profession, that he will not be ready to attend to any other class of diseases as readily as the general practitioner. In other words, he retains all the privileges of a general practitioner, while asserting for himself special or superior skill in the treatment of certain classes of diseases.

It is just this unfair assumption of superior attainments in certain departments of professional work, and the privilege of advertising it to the public without relinquishing any of the privileges of the general practitioner, that specialists have been contending for ever since specialism, so-called, has had a recognized existence. But the consideration of other questions in the letter of our Richmond correspondent must be delayed until our next issue.

SOCIETY PROCEEDINGS

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY OF BOSTON, MASS., OCTOBER 10, 1883.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY AND HYGIENE ALBERT N. BLODGETT, M.D., SECRETARY

Meeting called to order at 8 o'clock, Dr. G. B. Shattuck in the chair.

There being no pathological specimens for exhibition, the first business of the meeting was the reading of a paper¹ on "The Neglect of Ear Symptoms in the Diagnosis of Diseases of the Nervous System," by Dr. G. L. Walton, of which an abstract follows.

The study of the ear symptoms in nervous diseases has not kept pace with the general advance in neurology during the past twenty years, although otological research itself occupies at present a front rank in scientific progress.

It is not to be expected that the general practitioner should gain a thorough knowledge of the ear, although it is unfortunate that he should neglect it altogether, as in the exanthemata, where a little knowledge of otology would sometimes prevent, for example, hyperæmia from becoming a purulent inflammation, causing not only deafness but more serious symptoms, by extension of the process. There is certainly no reason for leaving the ear entirely out of consideration in the diagnosis and scientific study of nervous diseases. The eye has been so carefully studied for some time among neurologists that the diagnosis of locomotor ataxia or cerebral tumor without ophthalmoscopic examination is the exception, and the symptom "blindness" without further explanation would be considered an absurdity. Although we can not assume that an equal amount of advantage is to be expected from the study of the ear, there is certainly much to be gained, and it should not be altogether neglected.

As an example of the practical value of adding otological to neurological study may be mentioned the recent investigations into hysterical deafness, which have shown that it has pathognomonic characteristics, the hearing through the bone disappearing first, then that for high tones. A knowledge of these characteristics is not only of value in diagnosing the simple hysteria, but also medico-legally in examining the hysterical symptoms following railway and other injury, as recently pointed out especially by

Dr. J. S. Putnam² and the reader. A case, has, however, been recently reported by³ Landau and Remak, in which left sided hemiæsthesia of hysterical origin was accompanied by deafness on the opposite side. No examination of the ear was made and the hearing was only tested by the watch, and that only in the air, so that the right sided deafness may as well be attributed to middle ear disease, for example, as to hysteria, though no conclusions at all can be drawn from such incomplete evidence.

A systematic review of published cases in German, French, English and American journals show that while the eye is rarely, the ear is generally left out of consideration in diagnosing cerebral disease. The cases in which the ear is neglected may be classed as follows: (1) Those in which no note whatever is taken of the condition of the hearing, although the presence or absence of deafness would be of diagnostic value, (2) cases in which deafness is mentioned as a symptom in nervous disease without sufficient examination to exclude disease of the ear itself. The first is by far the most numerous class and includes, perhaps, the large majority of cases of cerebral lesion, such as tumor, hæmorrhage and abscess, to say nothing of hysteria and allied disturbances. Why the auditory nerve should be left out in the otherwise systematic analysis of such cases is not clear. The presence or absence of deafness would be of importance, for example, in question of lesion in the pons or cerebellum. Seymour⁴ has recently reported a case of cerebellar tumor pressing on the pons, in which deafness by air and bone added much to the certainty of the diagnosis afterward corroborated by autopsy. Although this case comes under the second class mentioned in that no examination of the ears was made, the probabilities were in favor of the tumor as the ætiological factor, and the case is quoted because Nothnagel in his text book on diagnosis of cerebral diseases states that no case of deafness is on record resulting from cerebellar disease. The same writer states that the auditory nerve is not often affected by tumors and hæmorrhages of the pons, basing this opinion on the fact that deafness is rarely mentioned in reports of such cases. He says himself that the fact is remarkable considering the situation of the auditory nerve. The most probable explanation of the seeming rarity of deafness in cases of disease of the cerebellum and pons is that it is seldom sought for, deafness being a symptom which often eludes the observation of both patient and physician, because fair hearing in one ear usually suffices until special attention is called to the subject.

(2) Deafness is frequently mentioned as a symptom of nervous disease by observers otherwise most accurate, with no examination or only superficial examination of the ear, so that the reader is often left in doubt as to whether the deafness is really due to the nervous lesion (tumor, locomotor ataxia, etc.), or to a plug of cerumen or catarrh of the middle ear. In exceptionally careful reports sometimes occurs the statement "membranes normal," but apparently

¹ Published in full in the *Journal of Nervous and Mental Diseases* October 1883.

² *Boston Medical and Surgical Journal* September 6 and October 11 1883.

³ *Boston Medical and Surgical Journal*, August 30 1883.

normal membranes may co-exist with extensive disease of the middle ear. In such cases the hearing through the bone is of great value, for this is generally apparently increased in disease of the middle ear and diminished or lost in case of nervous lesion.

Even when disease of the outer and middle ear is eliminated we are not justified in jumping at once to the brain, as there still remain the inner ear and the course of the nerve fibers to the brain. How unscientific, therefore, is the record of "deafness" among the symptoms of cerebral tumor or locomotor ataxia without further particulars.

Amongst other inaccuracies may be noted the fact that the patient's own statement is often relied on in eliminating the question of deafness as a symptom. The patient's statement that he hears well is, however, of absolutely no value, a total deafness of one ear going sometimes unnoticed for an indefinite length of time until suddenly revealed by accident, as by rolling over upon the well ear in bed.

Even the regular tests by the voice, tuning-fork, and rods are subject to such inaccuracies as to require careful study and repetition in the given case. Deaf children are often brought to the aural clinics who not only deceive their parents, but who would deceive the medical practitioner unless he exercised great care, because they turn so quickly when a noise is made near them that it seems as if they must have heard it. The same children will, perhaps, take no notice of the shrillest sound if made stealthily behind the head by an experimenter who remembers that the field of vision extends laterally over not far from 180° when the head remains quiet, and much farther when it is continually in motion.

As an example of lack of care in eliminating disease of the ear itself as causing deafness, cases of locomotor ataxia, notwithstanding the efforts of Prof. Lucae, have been repeatedly mentioned with deafness as a symptom, and with no examination, or the most superficial examination of the ears. If the ears were carefully examined the cases of deafness as a symptom of locomotor ataxia would probably be reduced to a minimum. The reader has failed indeed to find a single case during a careful search through forty cases, most of the patients being more or less deaf. "Meniere's disease" is often diagnosed with no examination of the ears, while the so-called Meniere's complex of symptoms is so common in disease of the middle and outer ear as to reduce greatly the number of cases in which otologists attribute them to nervous lesion.

"It is not the object of this paper to contend that the skill of an otologist should be added to the requirements for neurological training. It is rather to offer the suggestion that the ear deserves an interest at least approximating that accorded to the eye in the diagnosis of nervous diseases. It would certainly be desirable that every practitioner, whether neurologist or not, should practice the examination of the ear and hearing to such an extent as to avail himself at least of the aid gained from the appearance of the membranes, the patency of the Eustachian tubes, and the hearing by air and bone by the various tests, as well as the hearing for different tones, before

making a diagnosis of lesion of the nervous auditory apparatus. And further, it is to be hoped that the time is not far distant when reports of cerebral disease ignoring the condition of the hearing and the examination of the ears will be considered as incomplete, as they are at present without record of the condition of the eyes."

Dr. C. J. Blake said that in addition to the general interest of Dr. Walton's paper his remarks point a moral, namely, the dependence of specialists in medicine upon each other, for, while in investigations in physics special students pursuing parallel lines of research help each other to draw cross inferences, in medicine the lines of research in different departments are constantly coinciding, the cross inferences are already drawn by nature. The research of each specialty, therefore, complements and enlarges that of the others, and herein lies one of the safeguards against the narrowing tendency of specialism.

Dr. Walton's paper also contains an important hint to otologists in regard to the investigation of those disturbances of function which may be due either to an affection of the middle or the internal ear, or to both combined, a review of records of aural clinics during the past fifteen years, for instance, shows that the percentage of cases recorded as "disease of the inner ear," or as "nervous deafness," has steadily decreased. This decrease is due to the advancement in the knowledge of diseases of the external and middle ears, the sound-transmitting portions of the organs of hearing, making possible the proper classification of many diseases which were previously relegated to the limbo of "nervous deafness" for want of better knowledge. While the great progress which otology has made during the past fifteen years has been in the study of the middle ear principally, enough has been done and is doing in the investigations of the relations of the ear to the brain to show that the advance of the future is undoubtedly to be in the direction of neurological research.

Dr. B. O. Kinnear inquired the seat of the cerebral center of the auditory nerve.

Dr. Walton said it was supposed to be situated in the first temporo-sphenoidal convolution. Functional disturbances of this portion of the brain may be accompanied by impairment of the sense of hearing. In a recent report in one of the journals was a diagram of an abscess occupying the exact seat of the auditory center, but no allusion was made to the condition of the auditory function. Concussion of the cerebral substance has been followed by temporary disturbance of hearing, whether by vaso-motor or by molecular disturbance is uncertain.

Dr. George B. Shattuck read the next paper upon the subject of "Karin as an Antipyretic in Typhoid Fever, with Cases."

Dr. F. W. Draper read an account of two cases of typhoid fever also treated by Karin, and expressed the opinion that thus far the employment of this new substance has not been followed by better results than have attended the use of the more common agencies for the treatment of fever, which latter, if less energetic in lowering the temperature, are followed by no alarming symptoms, while in certainly one case in

which kairin was administered the immediate effects of the drug were dangerous to the life of the patient.

In reply to Dr J P Reynolds, who asked the further history of the cases of Dr Shattuck's report, the latter explained that they were not given in full, as his object was not to report cases of typhoid fever, or even of the effects of kairin upon the disease, for which purpose its exhibition had not been sufficiently long continued, but merely to report without prejudice practical tests of the action of the new remedy upon the pyrexia of typhoid fever and upon the patient as an individual. Dr Shattuck did not think the course of the disease had been really modified in any of these cases, with one possible exception, and in that the modification attributable to kairin may have been more apparent than real. This patient experienced a relapse after two weeks of convalescence. In this case the kairin produced great depression of the patient's strength. The lips became pinched, the extremities were livid, and the respiration embarrassed. One of the female patients was also very much depressed by the same drug.

Dr Reynolds remarked that it is strange that any medicine should cause a sudden and great decline in the temperature, to be followed immediately by a rise to even a greater degree than the original temperature.

The great benefit which is at present apparent from the action of this drug seems to be that which is obtained from the temporary reduction of the temperature, for it is now an accepted fact in all febrile diseases that the condition of the patient is always more hopeful when there are remissions in the temperature than when the high temperature is continuous.

Dr Shattuck said that in some of the cases in which the temperature was high—even 105° F, the pulse presented no corresponding rate of frequency. Antipyretics were not called for by the actual severity of the disease, but the drug was administered in order to give these patients all the benefits of science.

Dr Reynolds observed that ordinary cases of typhoid seldom call for the employment of antipyretics or for any marked or special treatment. Such patients do very well under careful nursing with very little medication.

In answer to Dr E G Cutler, the reader said that the peculiar dark-green color is the only gross evidence of the elimination of kairin by the kidneys, and there is nothing characteristic about the perspiration. A quantitative analysis of the urine was not made, and the trace of albumen found is common in typhoid or other fevers.

The German description of the action of the drug was pretty closely reproduced in most of the cases here reported.

MICHIGAN STATE BOARD OF HEALTH.

[Reported for the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.]

The regular meeting of the State Board of Health was held October 9, 1883, at its office in the capitol at Lansing, the following members being present: Arthur Hazlewood, M D, of Grand Rapids, C N

Tyler, M D, of Bay City, J H Kellogg, M D, of Battle Creek, and Henry B Baker, M D, Secretary.

The Secretary presented his annual report of property, showing valuable accessions to the library of the Board by gifts and exchanges, also his quarterly report of work done in the office, the regular correspondence alone, exclusive of many postal-card communications not copied, making 572 pages of the letter-book record.

From week to week, as magazines and other accessions to the library are received, considerable work is necessary to make references by which at any time papers on a given subject may be found, also to look up papers on various subjects, and to pack and ship books, etc., to those who undertake to write papers for sanitary conventions, or other uses. During the past quarter three such requests for books and papers have been filled.

A letter from Dr Whelan on behalf of the common council of Hillsdale invited this Board to hold a sanitary convention in that city. The invitation was accepted, the convention to be held at such time as shall be agreed upon hereafter. A letter was read from Rev J Pierson, D D, of Ionia, relative to holding a sanitary convention in that city. It was decided to hold one in Ionia, if practicable, early in December.

A communication from Hon C A Gower, requesting this Board to examine plans for a proposed new building at the State Reform School was received and acted upon.

A communication was read from Dr Isler, of the Upper Peninsula, requesting that the documents issued by this Board on the prevention of contagious diseases be translated and published in the Scandinavian and Finnish languages for the use of miners and others who do not read English, and among whom both scarlet fever and diphtheria are now present. The leaflet on communicable diseases (No 47) was ordered to be translated and published in the Scandinavian, French and Polish languages.

Announcement of the meeting of the American Public Health Association was made, and it was voted to hold a meeting of the Board in Detroit Nov 13, to attend the meeting of the Association, and to transact such business as may come before the Board.

A communication from the chairman of the Ontario Provincial Board of Health gave notice of a Sanitary Convention at London, Ontario, Nov 16 and 17. Drs Baker and Hazlewood were appointed to attend this Convention.

The secretary was directed to procure from the county clerks, for the uses of the Board, a list of the physicians in the several counties, and their postoffice address, if practicable.

A memorial was read from citizens of Morley, Mecosta county, relative to the throwing of sawdust and other refuse into a stream, a subject not controlled by the State Board, but by the courts. The memorialists had been so informed by the Secretary.

The secretary presented a resumé of the work of other Boards of Health.

The Boston, Mass., Board of Health has lately placed measles on its list of diseases to be reported

to the Board by householders and physicians That Board has publicly offered to superintend the process of disinfection, if requested to do so by the householder Dr Kellogg thought it desirable that Boards of Health superintend disinfection after contagious diseases, where possible He thought disinfection by sulphur would be more efficacious, if carried on in a moist atmosphere

Drs Hazlewood and Baker were appointed a committee to examine and report on text-books on hygiene with special reference to alcohol, if any such books are sent to the Board for examination

Dr Kellogg for himself and Dr Avery, Special Committee on the Present Knowledge Respecting Diphtheria, reported a paper embodying a large number of replies to a circular of inquiry, some being very valuable The report was accepted with thanks, and ordered printed in the annual report

The next meeting of the Board will probably be for the examination of plans for buildings at the State Reform School

DOMESTIC CORRESPONDENCE

CAMBRIDGE, MASS, Oct 29, 1883

N S DAVIS, M D, EDITOR

In an able and comprehensive report of the committee on Practical Medicine and Epidemics of the Illinois State Medical Society, for 1882-3, published in the weekly JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, October 13, last, the virtues attributed to alcohol as an internal remedy for its germicide power is referred to, also in the same report is mentioned Dr G M Sternberg's recent experiments on the germicide powers of a large number of medicinal agents According to this report Dr Sternberg's experiments show that the micrococcus of pus one of the most easily destroyed germs required the presence of 20 per cent of alcohol for its destruction, while the bacteria termo survived after being immersed in a solution of 95 per cent alcohol twenty-four hours From this it is calculated that the amount of alcohol required to be present in the blood of a patient weighing 160 pounds, to destroy the germs most susceptible to its influence would be more than a quart, "a much larger quantity than the most enthusiastic advocate of its use would deem safe to administer" Considering the importance of the subject, and having been accustomed for a long time to believe that many diseases and pathological conditions are dependent upon the presence of the germs, and that the administration of full but safe doses of alcoholic liquors when resorted to early, have been productive of much benefit in aborting or cutting short septic and zymotic diseases, I have thought it worth while to dwell somewhat upon the subject and to see whether there can be discovered certain factors or conditions which tend to substantiate such clinical experience I believe too, there is a growing feeling and experience on the part of the medical profession that there are many medicinal agents which can be administered in doses practically safe

for the patient, and yet be sufficiently effective for the destruction of the supposed germs or at least so as to modify its habits and constitution in its pathogenic condition, that its ravages on the human organism can be arrested or prevented

In referring to the careful and elaborate experiments of Dr Sternberg, it appears they, for the most part, were conducted in culture apparatus outside of the body and thus his experiments only represent the results of the germicide reagents or germs *other than pathogenic ones*, a distinction very important to be kept in mind by the experimenter if he expects much value to result from his labors For instance, if a certain amount of alcohol or other reagent is required to destroy or modify a micrococcus in a culture fluid outside of the animal organism, who will venture to say that that amount of the medicinal agent is needed after the micrococcus has gained admission into the blood, which in the early stages of disease may be well-nigh fatal to such micrococcus? Sternberg has recognized this distinction and has more than once made mention of pathogenic organisms Sternberg remarks in one place as follows "Evidently therapeutic value, assuming the correctness of the germ theory, cannot be gauged by germicide power alone, for it is possible that a reagent, which possesses this power in but slight degree or not at all may nevertheless be capable of restricting the development of pathogenic organisms, and thus limiting their power for mischief" Now, if it be permissible to take this view in the premises, as Sternberg has sanctioned, should we not look upon his own "Experimental data," as helps only in a most general way in our therapeutic practice? Surely with such a view of the case it would not seem to be necessary to give a quart of 95 per cent alcohol, nor three and one-half grains of mercuric bichloride to prevent the development of the septic micrococcus in the blood

Sternberg, speaking of "Bacteria in healthy individuals," says Nature has placed, or in other words, evolution has developed in the living tissue of animals, a resisting power against the encroachments of bacterial organisms invading and surrounding them, which is sufficient for ordinary emergencies But when the vital resistance of the tissues is reduced, on the one hand by wasting sickness, profuse discharges, etc, or on the other the vital activity of the invading parasitic organism is increased, the balance of power rests with the infinitesimal but potent micrococcus Again he says "Certainly there would be an end to all animal life or rather there never would have been a beginning, if living animals had no greater resisting power to the attacks of these parasites, which by numbers and rapid development make up for their minute size, than has dead animal matter"

These two citations not only bear the impress but the seal of philosophic and demonstrated truth, and this will all the more appear self evident when we consider the fact that the micro organism is isolated from the living animal and placed in a culture fluid when he has no enemies to encounter nor obstacles to overcome but on the other hand has the best possible chance for full and perfect development out of the rich and highly nourishing pabulum offered for

his choice Under such circumstances is it any wonder he becomes, if not a formidable, at least an extremely tough beast? Such being the fact our therapeutic practice, notwithstanding the many experiments claimed to have been so elaborate and painstaking, must, as already intimated, depend almost entirely upon empiricism, clinical experience and observation in the choice and use of medicinal agents of supposed germicide nature This thought further leads to the consideration that the product of these giant or monster germs on entering the animal tissues may take on a retrograde process, or as it were, a sort of atavistic condition in which they may become sensitive to exceedingly small doses of germicide reagents However this may be, all that is necessary for the therapist is, so to apply his medicinal agents that the development of the pathogenic micro-organism shall be arrested, if not by being destroyed, by being rendered *hors-du-combat* until the vital powers of the animal organism can react and the intruding micrococcus be expelled from its borders Very respectfully,

AUGUSTUS P. CLARKE, M.D.,

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BOOK REVIEWS

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA Thirty-fourth annual session Volume XV, 1883 Published by the Society

The most casual observer of medical progress in the United States must have noticed from the report of the proceedings annually made in the medical journals that the Medical Society of the State of Pennsylvania is accomplishing a great deal of valuable scientific work For several years the annual volume of transactions has been found teeming with records of experimental and clinical investigation, giving the results of the labors of the most eminent and accomplished physicians of Philadelphia and the entire State of Pennsylvania Such original observers and indefatigable workers as Oscar H. Allis, R. J. Lewis, William Goodell, Trail Green, R. S. Sutton, Wm. Pepper and James C. Wilson have chosen the annual meeting of the State Society as the occasion for presenting to the profession the result of their work The volume before us embodies the proceedings of the thirty-fourth annual session, held at Norristown in May, 1883

The address of the President, Dr. William Varian, of Titusville, is devoted to the consideration of some interesting hygienic problems, among others we note the question of cremation and modern means for the restoration of inebriates The address throughout is thoughtful and suggestive

The address on Medicine is by Dr. James Tyson of Philadelphia, and is a brief paper on "Malarial Hematuria" We presume its published title is adopted solely to comply with custom, since no report is made of recent advances in medicine or any of the topics usually discussed under this title of the "Address in Medicine in Medical Societies" This

paper occupies only seven pages, is carelessly written, and contains nothing strikingly novel or unique We believe Dr. Tyson could have prepared a paper more worthy the occasion The "Address in Surgery," is by Dr. Alex. Craig, of Columbus, the "Address in Obstetrics," a most interesting paper, is by Dr. George O. Moody, of Titusville, the "Address in Hygiene," is by Dr. Henry Leffmann, of Philadelphia, and the "Address in Mental Disorders," is by Dr. John Curwen, of Warren, Dr. Peter D. Keyser, of Philadelphia, contributes "Some Ophthalmological Observations During Ten Years Service in Mill's Eye Hospital," illustrated by numerous wood cuts, which will interest the cultivators of ophthalmic science Dr. Iowry Sibbett, of Carlisle, relates his experience in obstetric practice, with an analysis of one hundred consecutive cases Dr. Hugh Hamilton, of Harrisburg, contributes an article on "Artificial Infant Alimentation," which is the result of extensive investigation and study The subject is treated from the stand point of chemical analysis and physiological action, and does not include a clinical study of the various articles for artificial infant feeding This subject is of such vital importance and demands such increasing consideration with our growing civilization, that every contribution to the subject is welcome This volume contains two papers on "Insane Asylums and the Management of the Insane" We heartily wish that every official of all the insane asylums of this country would read and ponder that of Dr. Samuel Ajers, of Pittsburg, entitled "Our Asylums and our Insane" The other paper treats of "Insane Asylums and their Relations to the Community," by Dr. R. H. Chase, of Norristown Dr. DeForest Willard, of Philadelphia, in an admirable article advocates the "Early Treatment of Club Foot," deprecating the custom which "waits for the child to be old enough for the operation" Dr. E. A. Wood, of Pittsburg, treats of "Deformity Following Dislocation of the Foot Outwards at the Ankle Joint"

Dr. Samuel W. Gross, of Philadelphia, presents in brief a Plan for the Early and Thorough Removal of Carcinoma of the Breast His views on this subject have been made current through his Treatise on Mammary Tumors and in several papers published in the last few years

Dr. James C. Wilson, of Philadelphia, in a scholarly paper presents the Modern Method of Treating Purulent Pleural Effusions Dr. Wilson demonstrates his well-known ability as an accomplished and expert clinician in this article It is in reading such a paper as this that we regret that the Transactions of Societies are not more widely distributed Dr. Wilson's paper is so thoroughly practical and treats of such an important class of cases that it should be in the hands of every practitioner in the land The treatment is based upon the principle that the containing pus cavity is to be emptied and then obliterated by reparative inflammation For this purpose it is deemed essential that the opening when made into the chest be kept open, drained by a retained tube, and washed out daily We give Dr. Wilson's method in so far as descriptive of the oper

ation in his own words "The preliminary aspiration, the puncture by means of short trocars (not exceeding in length two inches), the canula being retained only until the pus ceases to flow, when a soft rubber catheter (Nelaton or Jacques') is slipped into position through the metal canula, which is then withdrawn. Catheters are preferable to sections of drainage-tube by reason of the ease with which they can be introduced into the sinus by means of a probe. It is occasionally necessary to change the catheter, or to remove it to clean it. The catheter is retained throughout the treatment by means of silk threads run through its substance and confined to the chest by means of strips of plaster. The washing of the cavity by means of a ball syringe and a system of soft rubber tubing, the connections being made by sections of tapering glass tubes.¹ This operation is to be repeated once a day. The temperature of the water should be from 102° to 105° F., and the amount of force used very slight indeed. At the first sitting no more should be injected each time than one-fourth the volume of the pus withdrawn. This injection is to be repeated at each sitting until the water returns only slightly turbid or clear. After having used for this purpose many of the disinfectants in vogue, I have settled upon the mercuric bichloride as the most efficient and convenient. At first I use 1 part to 15,000, then 1 to 8,000, and finally 1 to 5,000. In the intervals of the dressings the patient wears a large pad of oakum to absorb the discharge. As the cavity contracts and the discharge diminishes, the intervals between the washings may be much prolonged, when the discharge becomes serous and does not exceed two fluid-drachms, the tube should be withdrawn and the sinus permitted to heal. If a spontaneous opening have formed in the chest-wall, this plan of treatment is not thereby modified. Such sinuses are badly located, oblique, tortuous and always ineligible for operative purposes. In such cases proceed as if no spontaneous opening existed. After the operations such openings speedily heal. Bronchial fistulæ are equally without influence in modifying the treatment."

Dr William Pepper, of Philadelphia, follows in a contribution to the "Clinical Study of Typhlitis, and Perityphlitis." This paper is just what its title indicates—viz, a clinical study—and is the work of a logical, systematic and painstaking clinical observer. A group of most interesting cases are here detailed, and the author has brought to the study of this vitally important class of cases a thorough familiarity with the history and literature of the subject. The paper is eminently practical, and deals more particularly with the diagnosis and treatment of the various stages of typhlitis and perityphlitis. We regret that our space will not allow a resume of this paper. Dr E. O. Birdwell, of Emporium, contributes a brief paper on "Scarlatina," detailing his personal experience with this disease. Dr John V. Shoemaker, of Philadelphia, follows in an interesting and instructive paper on the "Hair, its Use and Care."

This paper, as also the ingenious contribution of Dr R. J. Levis, of Philadelphia, on "Surgical Expedients in Emergencies," has been elsewhere published in abstract and hence both are familiar to the readers of current medical literature. Both gentlemen are so well known in connection with dermatology and operative surgery respectively as to deservedly receive the attention of the profession whenever their views are promulgated. The following papers, eminently practical and instructive, were prevented from noticing in detail by want of space: "Diagnosis, Prognosis and Treatment of Mitral Stenosis," by J. T. Eskridge, M.D., of Philadelphia; "Lithæmia," by J. B. Walker, M.D., of Philadelphia; "Clinical Notes on *Conrallaria Maja*," by Edmund T. Bruen, M.D., of Philadelphia; "Abnormal Ocular Conditions," by William S. Little, M.D., of Philadelphia; "House Plants and Lung Disease," by J. M. Anders, M.D., of Philadelphia. The remainder of the volume is occupied with reports of the County Societies. These reports show the local societies in the various counties in the State of Pennsylvania to be in excellent working condition, and thoroughly *en rapport* with the State Society. Indeed, one cannot peruse the ninety-six pages of this volume devoted to the reports of the County Societies without a feeling of felicitation. In addition to setting forth the condition of the Societies in the various counties, interesting and valuable data are here recorded of local epidemic influences, local sanitation, and clinical observation. This portion of the volume particularly and eminently reflects well-merited distinction upon that most efficient of permanent secretaries, Dr Wm. B. Atkinson, of Philadelphia, whose industry and intelligent supervision, as well as the efficiency of the organization, is conspicuous. This portion of the volume is the strongest argument which could be offered in reply to the objections which are urged against the publication of the proceedings of State Societies in this form instead of through the columns of the medical press. It would be quite impossible to gather within one cover the data here recorded unless the State Society of Pennsylvania could equip, edit and publish a journal of its own. This for State Societies is, of course, impracticable at the present time. The volume closes with a complete alphabetical list of the presidents and permanent members of the State Society, the officers and members of the County Societies, and appended to the whole is an alphabetical list of members of County Societies with their post-offices. Those only who have some practical knowledge of the work of a secretary can fully appreciate the labor devolving upon that officer in the preparation of such a volume. The entire profession of Pennsylvania is to be congratulated upon the condition of the State Society as indicated by the volume of Transactions for 1883.

¹ The author maintains that the chest cavity cannot be properly washed out by a tube pressed in at one opening and out at another (through drainage) but with a single opening the distension of the cavity with due caution can be practiced at each sitting when the syringe is used.

MISCELLANEOUS

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM OCTOBER 26, 1883, TO NOVEMBER 2, 1883

Moore, John, Lieutenant-Colonel and Assistant Medical Purveyor to be relieved from duty as Medical Director, Headquarters Department of the Columbia, to proceed to San Francisco, California, and assume charge of the medical purveying depot in that city (Par 10, S O 243, A G O, October 24, 1883)

McKee, James C, Major and Surgeon relieved from duty in the Department of California and assigned to duty as Medical Director Department of the Columbia (Par 5, S O 249, A G O, October 31, 1883)

Wolverton, Wm D, Major and Surgeon granted leave of absence for one month (Par 6, S O 201, Department of the East, October 24, 1883)

Merrill, J C, Captain and Assistant Surgeon granted leave of absence for one month (Par 7, S O 201, Department of the East, October 24, 1883)

NECROLOGY

ZITZER, JOHN JACOB, M D, was born in Friedburg, Prussia, February 20, 1826, died of general debility, the result of pneumonia, at his residence in Baltimore, Md, October 30, 1883. He was descended from an old aristocratic and influential family in Germany. After graduating from Heidelberg, he entered the Prussian army as a surgeon. Here he was noted for a high order of intelligence, and for his republican principles and soldierly bearing, and professional skill. His democratic and red republican views led to his resignation from the army. He then went to Hungary and accepted service there, and became Surgeon General of the Hungarian army. After the failure of the revolution there he came to America, and settled at Carlisle, Pa, where his abilities as a physician and his worth as a citizen led to extensive employment in his profession, and to popularity, and particularly with the German population of Pennsylvania. His views of government were so pronounced, that he soon began to take part in local, State, and national politics, and became quite a leader among the Germans. He was at one time Chairman of the Republican State Central Committee of Pennsylvania. Dr Zitzer had the pleasure of first introducing Carl Schurz to a Republican mass meeting, where his eloquence was so effective. The doctor was extensively known throughout the State of Pennsylvania, and held in high esteem by the leaders of the Republican party, and had for warm personal friends General Grant and Simon Cameron. He was a member of the Cumberland County Medical Society, and a delegate from it to the American Medical Association in 1869. He attended the meetings of the latter again in 1871 and 1872. He

was made an honorary member of the California State Medical Society, when in San Francisco in 1871. He was as restless in his medical views as he was revolutionary in political principles. Doctor Zitzer had acquired a considerable estate, among which were two valuable farms near Carlisle, which he leaves to his three daughters. To his faithful housekeeper and attendant he gave a hotel property in Carlisle. His remains were taken to Carlisle, and interred in the old grave-yard. J M T

MONTGOMERY, EDWARD, M D, of St Louis, Mo, was born in Ballymena, near Belfast, County Antrim, Ireland, December 20, 1816, died of pneumonia at his residence in St Louis, Mo, October 29, 1883. His education was obtained in the Royal Academical Institution of Belfast, and his medical studies pursued at Edinburg, where he received his degree of M D in 1838. Shortly after he began practice in his native place, but in 1842 he came to America, and passed some years in the States of Louisiana and Mississippi. But in 1849 he settled in St Louis as a general practitioner, where he acquired an extensive and responsible business. Dr Montgomery was a man of agreeable manners and of exemplary character, and esteemed by the public and his professional brethren. In 1839 he was united in marriage to Hannah French, of French Park, near Belfast, who survives him with six children—four sons and two daughters. Dr Montgomery re-visited Europe and his native place in 1873, being delegated that year from the American Medical Association to the British Medical Association, and was also one of the Commissioners from the State of Missouri to the Vienna Exposition, both of which he attended. The doctor was a careful reader of the best medical works, a close and an accurate observer of disease, and an occasional contributor to medical journal literature. I cannot enumerate his writings, but among them were essays on congestion, typhus, typhoid, erysipelas, and puerperal fevers, on cholera, croup, cerebro spinal meningitis, ileo colitis, hepatic colic, post-partum inflammation, scarlatina, diphtheria, uterine hæmorrhage, variolæ anti-phlogistic treatment, and differential diagnosis of croup and diphtheria, etc. Dr Montgomery was an active and influential member of the St Louis Medical Society, and of the St Louis Medico-Chirurgical Society, and was honored with the presidency in both. He was also a valued member of the Missouri State Medical Society, which he served as vice president and as president. He became a member of the American Medical Association in 1872, and attended the following year. Dr Montgomery had a taste for the exact and natural sciences, and was a member of the St Louis Academy of Sciences. The death of a physician of medicine in actual practice, after but a brief illness, produces quite a shock to a community where he is intimately known, as was Dr Montgomery for a third of a century. Besides his eminence as a physician, he discharged all the duties of a good citizen, an indulgent parent, a kind husband, and the faithful friend. His funeral took place from the Central Presbyterian Church. J M T

THE Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY

VOL I

CHICAGO, NOVEMBER 17, 1883

No 19

ORIGINAL ARTICLES

CEPHALÆMATOMA OF THE NEW-BORN

DR C W EARLE, CHICAGO

[Read before the Section on Diseases of Children]

This is a soft, elastic, fluctuating tumor, generally painless, and situated upon one of the cranial bones. It takes place, it seems to me, with somewhat greater frequency than the literature of the subject would lead us to suppose. I have already seen six cases in twelve years' practice.

It is stated by most writers, that in the great majority of cases, indeed in almost all, the tumors have been upon the right parietal bone, inasmuch as it is this bone that is exposed to the pressure of the rigid os uteri in the greatest number of deliveries. Contrary to the experience of other observers, five cases which I have seen have taken place upon the left parietal bone and one on the right. It has, in a few cases, been noticed upon both of the parietal bones, although this has not occurred in my practice.

Professor Byford has observed at least one case of this kind, and Jacobi and other authorities make mention of a double cephalæmatoma.

The tumor has not, in my cases, made its appearance immediately after birth. From one to four days usually elapse before my attention has been called to the difficulty.

When it is first noticed it is usually a soft and painless enlargement, but in the course of a few days a firm ridge is usually noticed surrounding its base. This ridge, which is almost, if not quite, pathognomonic, is produced by the efforts of nature to repair the injury.

The seat of the difficulty is between the bone proper and the periosteum, and the enlargement is caused by the rupture of a blood-vessel in this position. The hard ring which I have mentioned is bony material thrown out from the periosteum, and does not in every case contract evenly in all directions. In one or two cases I have noticed hard projections apparently springing toward the summit of the tumor with greater rapidity than in other places.

As this deposit goes on, the tumor loses its soft fluctuating feel, and in the course of a few weeks nothing can be detected except a slight want of symmetry in the two parietal bones, and even this usually disappears in a few months.

We have been taught that this difficulty is caused by pressure upon the cranial surface by a rigid os

uteri. In all probability the great majority of these cases are caused by this pressure, but from the fact that cephalæmatoma have been observed in breech deliveries,¹ it must be admitted that the rigid os does not, in every case, produce the tumor.

It is possible, it appears to me, that, in addition to the pressure exerted by a rigid os uteri, and from injuries received by forceps, that there may exist in the blood-vessels a tendency to rupture with ease,—an undue thinness of these vessels, which produce a liability to hæmorrhage.

The most important question, however, connected with this entire subject is its diagnosis, and it appears to me that there are four difficulties with which it is liable to be confounded:

- 1 Caput succedaneum
- 2 Congenital encephalocele or herma cerebri
- 3 Erectile tumors
- 4 Craniotabes

There appears to be a tendency on the part of some writers upon the subject, to confound caput succedaneum with cephalæmatoma. There is absolutely no similarity between the two difficulties, excepting, perhaps, that they are projections or enlargements upon a certain part of the head.

The *caput succedaneum* is an oedematous condition of the tissues, a difficulty of the scalp, cellular tissue and blood-vessels, etc., etc., which is usually found directly upon the presenting part, and may embrace one of the sutures. It does not fluctuate, and disappears rapidly. It is more prominent, more pointed, and has altogether a more boggy feel than the cephalæmatoma. A cephalæmatoma is a collection of blood between bone and its periosteum. It never is in the line of a suture. It fluctuates, and has every appearance of free fluid, surrounded by tissues. In the course of a few days, the bony ridge, to which I have already alluded, can be made out, and our diagnosis is complete.

I should remark before leaving this part of my subject, that a caput succedaneum may hide a cephalæmatoma for three or four days. That is, we may have an ordinary oedematous tumor on the presenting part of the head, and under this, and between the bone and its covering proper, a ruptured blood-vessel and a collection of fluid blood, which makes itself known after the oedema subsides.

Congenital encephalocele never occurs, with possibly an exception in necrosis from syphilis in the body of the cranial bones. It always appears in the line of some suture, and is usually felt by

chronous with the heart Cries and agitation of the child cause it to enlarge

A *vascular tumor* has somewhat the same boggy feel which I have noticed in caput succedaneum It may take place in the same position that we usually find a cephalæmatoma, but it does not fluctuate It has no bony ridge It usually does not protrude as a cephalæmatoma does

By *craniotabes*, is meant the soft places which are found upon the cranial bones in rickety children It has appeared to me that a layer of bone in some of these children can be so thin, or can be absolutely wanting to such an extent that a softness and fluctuation could almost be made out, thus giving rise to the suspicion that a bloody tumor of the scalp existed at this point Such a case as this never occurred in my practice, but it always appeared to me possible, and, in my teachings I have cautioned my students in this respect

Treatment—The treatment of these cases really amounts to a judicious letting alone Nature, in a great majority of the cases, cures this difficulty without any assistance There is, however, on the part of parents and friends, a constant desire to interfere, and the physician will be importuned, in season and out of season, to poultice and blister and to open, and in every possible way interfere with the process that nature is following out to perfect a cure

Formerly it was regarded as good practice to open these tumors, but from the fact that a number of them thus opened were followed with long continued suppuration and exhaustion, and, in some cases, death, it has more recently been regarded the best practice to not expose the internal part of the tumor to the air by opening them, but to allow nature to perfect a cure Some mild anodyne liniment or embrocation may be ordered and the tumor should be protected from any external violence Where the tension is very great, and the tumor somewhat larger than usual, and in cases where the child experiences considerable pain, it is probably better to depart from the usual methods of treatment, that of letting it alone, and with proper antiseptic precautions open the tumor, cleanse out the cavity and dress it in such a manner as to prevent, as nearly as possible, suppuration

A case similar to this has recently been observed in the Cook County Hospital of Chicago, where the tumor became so painful that the child was kept from obtaining its usual rest, and its nutrition became very greatly impaired, until finally an incision was made with the precautions which I have stated above and the child made an excellent recovery

What I desire to call attention to in this brief paper is, first, the greater frequency of this difficulty than we have hitherto supposed, secondly, the presence of the tumor in the right parietal bone in five cases of the six I have seen, third, to the four points of differential diagnosis, and, finally, that in a few cases, where the pain, swelling and tension becomes very great, it is admissible, indeed, the best practice to open these enlargements and treat them antiseptically

TWO CASES OF ABDOMINAL SURGERY--BOTH FATAL

By J P THOMAS, M D, PEMBROKE, KY

[Read before McDowell Medical Society, Oct 24, 1883]

OVARIOTOMY

CASE I—On Aug 1, 1878, I was called to visit Mrs M, white, æt 51 years, on account of an attack of malarial fever I found her unusually prostrated, but learned that she had been the subject of chills for two months, which had finally resulted in remittent fever, which satisfactorily accounted for her anæmic and prostrated condition In a few days the fever was arrested Prescribing a simple tonic, I was about to discharge the patient, when she called my attention to an enlargement of the abdomen, of which she gave the following history About the 1st of June (1878), while dropping tobacco plants for her husband to transplant, she felt something give way in her right side, which caused most excruciating pain for a short time, but as the pain soon ceased, she continued her occupation until night, and on examination of the now very sore side (left hypogastrium) discovered for the first time a knot about the size of a small orange, which had increased very rapidly since, and added, "I am afraid I am pregnant"

Her abdomen was fully as large as a woman in her sixth month of gestation She had been for two years passing through the menopause, and this, with her own age and that of her youngest child (5 years old), was sufficient to assure her that she was not pregnant, but, as none of my assertions or arguments would convince her to the contrary, to accomplish the object, I made a careful examination—rectal, vaginal, uterine, percussion, palpation, etc The sound entered the uterus $3\frac{1}{2}$ inches, which was movable, and its movement imparted a distinct impulse to the tumor, which evidently had its origin upon the right side I diagnosed cystic degeneration of left ovary, without adhesions

Her situation was fully explained to her, also the only means that offered any hope of a cure, and the risk of the operation to life, dwelling upon the hazard she would be exposed to by the removal of the tumor After she seemed fully to understand and appreciate the danger of the operation, she was advised to consult her husband and friends, and consider the matter well before she decided But she at once concluded to undergo the operation, even urged its immediate performance, which, I now regret to say, I declined But being governed by authorities who advise a postponement of the operation as long as the woman can live with the least comfort, also hoping to be able to improve her general health, which latter object I think unattainable in cases where the growth is rapid, as was the case in this instance From the 1st of June to its removal, on the 20th of September, it had attained such enormous dimensions as to extend to the knee caps when in a sitting position But let that be as it may, it continued to grow, and she to emaciate in the same ratio, and that in spite of the best tonics and tissue builders, until it seemed that all the tissues of the organism were being absorbed by the tumor,

and it was plain from examinations made from time to time, that adhesions were as rapidly forming. My experience in this case, and three others I have seen, leads me to think that some very high authorities on ovariectomy are in error when they advise the postponement of the operation, as one says,¹ "until it (the tumor) has grown so large as to distend the belly, and when the woman has become thin and her health begun to fail." The reasons for waiting, as given by the same distinguished authority—that is, if an operation has been decided on—do not, in my opinion, counterbalance the sometimes innumerable adhesions that develop after a correct diagnosis has been made, and the operation decided on, viz that by waiting until death is imminent before the operation, "that the woman will have lived longer, should the operation result in death, that the abdominal walls having become thinner, the incision will be proportionately shorter and shallower (why shorter, he does not say), that the patient being less full-blooded, both hemorrhage and inflammation will not be so likely to occur, and that the pressure and rubbing to which the peritoneum has been for some time subjected will make it less vulnerable, and therefore less likely to take on inflammatory action." The woman would, of course have lived longer, provided an early operation proved fatal, but its postponement as certainly increases the risk, and lessens her chances of living out her allotted days in comfort. As to the thinning of the abdominal walls, the depth of the incision above, or aside from the peritoneum, makes but little difference, and there are but few who are very full-blooded when first seen by the surgeon, and when they are, the necessary hemorrhage and continued drainage will ordinarily counterbalance plethora.

Lastly, this able authority seems to overlook the fact that this same rubbing and pressure that he speaks of as rendering the peritoneum less liable to take on inflammatory action, is the cause, to a great extent, of the adhesions, and all admit that in proportion to the number and extent of the plastic deposits or inflammatory exudates resulting in adhesions, is the danger of the operation. This none will deny, but recognize as in accord with pathological common sense, and practical clinical experience. Before describing the product, and manner of the termination of this case, it is perhaps only justice to the operator, that a brief note should be given of the antecedent history of the patient.

- 1 She was of strumous diathesis from birth
- 2 Constant tendency to development of scrofula
Tuberculous heredity
- 3 Mother and two sisters died of phthisis pulmonalis
- 4 In 1863 had hepatic abscess, which fortunately pointed externally and was opened by an ordinary abscess lancet, but the discharge of pus, first and last, was so enormous and reduced her to such an extent as to cause me to despair of her life
- 5 Though the mother of five children, there was an intermission of thirteen years from the birth of the first to the birth of the second child, after which the

remaining three were born with only an average of two years between births. However, for two years before the birth of the second child, I had treated her for anteversion, ulceration of the os and cervix, and irregular menstruation, all of which, each in part, were considered as the cause of her sterility, which was verified on her becoming pregnant when these well-known obstacles to fecundation were removed.

6 Then her present surroundings were anything but favorable for so formidable an operation, viz, only one room to the house, and that overstocked with furniture. This was operating bed and reception room, the patient having about a dozen female friends as "near neighbors," who, as is usual in all rural districts on such occasions, were over-burdened with curiosity, meddlesome attentions, and full of gossip—all under the name of sympathetic interest in the patient.

Yet with all the above obstacles in the way of success, on the 20th of September, 1878, assisted by Drs Fairleigh and Hickman, of Hopkinsville, Ky, and two medical students, she was given a hypodermic of morphia and an ounce of whisky per os. A mixture of chloroform and alcohol was the anæsthetic employed. When fully chloroformed—previous to the abdominal incision—a large-sized aspirator needle was introduced but failed to give exit to any discharge on account of the semi-solid contents of the sack. On withdrawing the needle, on its point was a portion of a thick jelly-like substance, showing it to be a colloid cystic tumor. Though the tumor was extremely large, yet believing the shorter the incision the less risk, and thinking it an easy matter to open the sack and dip out its contents, if necessary, only the usual incision from umbilicus to pubes was at first made, but, on opening the sack, its contents were sufficiently solid to be easily removed by the hand, and after the removal of a water bucketful of a colloid substance consisting of alternate strata of an amber and violet colored jelly, it was found impossible to open and empty the several small cysts, and necessary to enlarge the incision up to the ensiform cartilage which was done by cutting around the umbilicus to the left. After detaching with the hands the numerous adhesions and ligating a small portion of the omentum, the sack was found with a short thick neck, which was ligated by transfixing it through the center with a perineal needle armed with a heavy double ligature of saddler's silk previously soaked in a strong solution of carbolic acid, and firmly tied on each half. The cavity was carefully sponged out with a five per cent carbolic solution, the abdominal incision closed with interrupted silver sutures. The pedicle was returned to the cavity but the long ends of the silk ligature left hanging out of the pubic end of the wound for drainage. Compresses wet in a ten per cent solution of carbolic acid were placed over the wound, and the whole secured by broad flannel bandage. Every antiseptic precaution was employed except the spray. Operation occupied fifty five minutes. After patient was put to bed and warm applications made, reaction was prompt and complete, recovery from chloro

¹ Goodell's Lessons in Gynecology

form and shock perfect, but within an hour there was considerable oozing from the numerous minute vessels torn in breaking up the adhesions. This discharge of bloody serum was so profuse that I summoned my consultants who had left. They only advised that she be turned on her side to facilitate the drainage, and their prognosis was very hopeful. This drainage continued over twenty-four hours, and then gradually ceased. Temperature was never over 101° and pulse never higher than 95. On second and third days she was cheerful, with a good appetite, and several times expressed her gratitude to me for the relief she felt. The bladder was emptied every eight hours by the catheter, and usually contained from eight to ten ounces of rather coffee-colored urine—the color of which created a suspicion that the kidneys were not exactly in a healthy condition. After drawing off the urine on the morning of September 24th, at one A. M., only about four ounces, I was compelled to leave her for a few hours in the care of an inexperienced female and husband. On returning at nine A. M. I found the room full of gossiping women who had several times been requested to remain away from the patient, but as there was but the one room it was very difficult to keep them out of it. Also, to my chagrin, observed symptoms pointing to uremic poisoning, in the stupor so characteristic of a cessation of the secretory action of the kidneys, but on arousing her she conversed intelligently and said she was very comfortable, but, on being left to herself, would fall into a stupor. I at once introduced the catheter and found the bladder only contained a few spoonfuls of “coffee grounds” urine with distinct carbolic acid odor.

I have seen a case of poisoning by carbolic acid taken by mistake, which recovered, but the urine passed for several days was precisely of the same character as that found in this woman's bladder.

She was turned upon her side, the region of the kidneys cupped, diuretics administered, even pilocarpine in one-fourth grain doses hypodermically, but in spite of the best efforts to arouse the kidneys to action, they could not be made to resume their function, and my patient died—not from the operation, but of *uræmia*, from failure of the kidneys to excrete the excess of uric acid, the suppression being produced by absorption of carbolic acid.

The abdominal wound had healed by first intention, except at the lower extremity of the incision, which gave exit to the ligature of the pedicle, and the sutures would have been removed the next day. There was never any symptom of peritonitis, pyæmia, or septicæmia, the three most formidable adversaries against which the operator usually expects to have to contend.

The mania for Listerism has already caused many, and no doubt is yet destined to cause many more deaths, by the excessive use of carbolic acid, for occasionally poisoning has resulted from the weakest solutions.

Listerism has only taught us cleanliness, watchfulness, and painstaking, just as homœopathy taught us to rely upon smaller and more frequently repeated doses. But it is evidently on the wane. Dr. Hol-

lister, of Chicago, in his address on “Practical Medicine” before the American Medical Association, struck the key-note when he said “Within fifty years Listerism will be a procedure of the past, and only remembered as a literary curiosity.”

It, like many other fashions in medicine, was reared upon mere hypothesis, has had its day, but is now on the down grade, being gradually abandoned by the leaders of professional opinion. Many who now employ “antiseptics” in surgery, do so because they fear professional censure and criticism, should failure result.

I have had invariably as good success in the treatment of wounds by the old methods, but in capital operations I employ it in part, to avoid criticism in cases of death.

This tumor sack and contents weighed $44\frac{1}{2}$ lbs., some of the contents were lost. I am convinced if I had operated two months sooner than I did, that there would have been but few or no adhesions, and that the patient would have been in much better constitutional condition, and the kidneys perhaps in better condition to eliminate the urea, and even resist the action of the carbolic acid.

LAPARO-HYSTERECTOMY

CASE II—Mary Bronaugh, colored, æt 50, mother of several children, had been for two months unable to continue her occupation as cook, had been treated by another physician, but without benefit and she continued to complain of the same symptoms, and to lose flesh more rapidly than was usual in an attack of malarial fever, for which she had been treated by my predecessor. I was sent for to see her on the 16th of October, 1882. From the following symptoms and history, my diagnosis was chronic intermittent fever, so at the beginning, there was but slight disagreement with her former physician.

Symptoms—Constant aching in all the joints, back and head, accompanied with an exacerbation of fever every afternoon about three o'clock, without any discoverable cold stage, almost constant nausea, and extreme tenderness of epigastrium, but inability to vomit, tongue heavily coated, complete anorexia, but little thirst, bowels constipated, slightly pyralized. At this visit, there was no report of any abdominal enlargement, or complaint of pain referable to bowels. Cachectic in appearance, and considerably emaciated. Prescribed an effervescing cathartic, to be repeated until bowels acted thoroughly, sinapisms to stomach, and on spine opposite stomach, crushed ice, and a powder of bismuth with one drop of hydrocyanic acid dil. every hour, a four grain capsule of quinine every two hours, if stomach would retain it. This treatment to be continued until next visit. Oct 17, 5 P. M. (two hours after usual rise of fever), said she felt much better, no rise of fever, nausea relieved, had been able to retain ten of the capsules of quinia (40 grs), but still complained of soreness over the stomach, and added, “My bowels pain me very much at times, and are swollen.”

Placing my hand under the cover to ascertain the location of the pain referred to her bowels, and the character of swelling, I was very much astonished to

find the whole abdomen as large as that of a woman at full term. On combining inspection with careful palpation, I discovered a hard, nodulated mass, extending from the ramus of pubis to the umbilicus, apparently not only surrounded, but covered by fluid. The entire abdomen had that peculiar rounded contour characteristic of ovarian cystic tumor, the navel somewhat depressed, and not the least pouting, as is usual in ascites. This was the appearance of the umbilicus, notwithstanding the central hard mass, which conveyed to the touch the sense of the nates of an emaciated foetus.

This woman was an old servant of the family with whom she lived, being their slave in ante bellum days, and with whom she had continued to live and serve as cook, and consequently they were very much attached to her, and interested in her illness. Yet neither she nor her employers had ever even suspected anything abnormal about her belly, except very recently, she had discovered it was larger than usual, and had never suffered any pain in that region until since she was attacked with this spell of fever, and now, it was only occasionally severe, but had been more so within the past week.

After several visits and as many examinations, embracing uterine and rectal, though I could discover nothing resembling either ovary per rectum or per vagina, it was plain the uterus was immovable. She had passed the menopause four years before, the characteristic cachexia of malignant disease was marked, with extreme emaciation, and yet, I reached only a doubtful and unsatisfactory diagnosis of "ovarian cystic fibroid tumor." It is yet inexplicable to me why I was so dull as to exclude malignant growth, though often considered. The only reason is, perhaps, that her white friends, who were intelligent and observant, had never suspected any growth, and she had never suffered pain in this region until recently, and it was evident that the growth and development of the tumor had been of long standing. However, I finally excluded malignant disease for the unsatisfactory diagnosis of cystic degeneration of one or both ovaries, solid and fluid, with adhesions. She and her former mistress were made to understand that she was beyond the reach of medicine, and nothing but the aid of surgery could offer her a chance for life, the dangerous character of the operation, and one, in her special case, that would almost certainly prove fatal, and might result in death sooner than if none were performed, but there was a bare chance that a cure might result from the removal of the tumor.

To my astonishment, she without a moment's hesitation, expressed an anxious desire to have it performed.

As her malinal attack seemed "broken up," I placed her on tonics and good diet, and promised that I would consider the expediency of an operation. I left her, and did not again see her for ten days, having really abandoned any idea I may have had of attempting an operation when she sent for me. On complying with her summons, I was struck with the still further rapidity of the emaciation in so short a time. She was now a great sufferer from pain

and dyspnoea, requiring laudanum at night to procure sleep. The tumor had increased somewhat in general contour, and it was plain that the adhesions were more extensive than I had before realized, apparently to entire walls of the abdominal cavity.

She said she "had sent for me to beg me to please cut her open and take this thing out." I now used every argument to dissuade her from the idea of an operation, telling her over and over of the extreme risk of the operation, and finally that I feared she might die on the operating table, and if not so soon, that I could hold out but small hopes of success.

She only implored and plead for the operation, saying, "If I had a sharp razor I could and would cut myself open" and that she had rather die asleep under the knife than live another day as she was living. Finding it impossible to reason her out of her determination to be operated on, I promised to call to my aid counsel, and after they had examined her, if an operation was decided on, that I would perform it, but that she must wait until colder weather. Now, having a slight suspicion of the malignant character of the tumor, as a sort of placebo, but with a hope it might build her up to some extent, I put her upon Dr Goodell's four chlorides, as he terms it. It is as follows:

R—Hydrarg, chloridi corrosivi	grs ii
Liq arsenici chloridi	ʒi
Tinct ferri chloridi	ʒi iii
Acid hydrochlorici dil	ʒiv
Syrupi	ʒi iii
Aquæ	ʒi ii
M	

Signa—One dessertspoonful ter in die, in wine glass of water after meals.

This compound has done me good service in many cases of chlorotic anæmic girls, in amenorrhœa, and other cases of uterine disease. It is the best appetizing tonic, as well as alterative, to be culled from the materia medica, and did seem to improve the constitutional tone of this woman.

In accord with promise, the 20th of November was appointed to meet counsel, and, if so decided, operate.

In the presence and with the counsel and assistance of the following gentlemen, the operation with the long name at the head of this report, or hysterectomy or Freund's operation, was performed. Drs Fuqua, Fairleigh, and Sergeant, of Hopkinsville, Dr Barton W Stone, of Western Asylum for the Insane, and Drs Robertson and Bell, of Pembroke. To show the extreme difficulty of making a correct diagnosis of cancer of the fundus uteri, where the os and cervix are free from the disease, and in fact of many of these abdominal growths, I will state the diagnosis arrived at in this case by all present and that after careful conjoined manipulation, with both vaginal and rectal exploration, together with aspiration of the tumor, which latter operation revealed only acetic fluid, with the same dark amber color slightly tinged with bl. As announced by two of the ger considerable experience in abdo had given

the subject studious attention, besides, they are gentlemen of acknowledged ability as skillful surgeons—Drs Fuqua and Fairleigh—was solid encysted ovarian tumor, complicated with ascites, and extensive adhesions, with but small hope of a successful result, but as the patient pleaded so earnestly for the operation, no matter how doubtful the success, that she should be given the benefit of the only chance for her life

In this decision all concurred

Personally, I was satisfied the diagnosis was nearly correct. When, again, the smallness of the chance of saving her life, and the almost certainty of a fatal termination of the operation, was explained to her in the plainest language that could be employed, to give her a full knowledge of the risk she ran of immediate death, but with the assurance that death was inevitable in a very short time if no operation was performed, still firm in her demand for its performance, she was chloroformed. Every emergency had been previously provided for, as temperature of room, hot water, a number of bottles, the furniture of room removed, whiskey, hypodermic syringe, etc., etc., the usual antiseptic precautions employed, except the spray and gauze dressing, each gentleman assigned his part, every respiration and pulsation carefully watched—or, in brief, I was ably and skillfully assisted

The usual incision of the abdominal wall down to the fascia, directly following the linea alba, beginning just below the umbilicus and extending to the pubis, the fascia was incised upon a grooved director until the peritonæum was reached. There being no bleeding this membrane was nicked by scissors preparatory to dividing it and bringing into view the sack, but this small nick was sufficient to inform me there was no sack, but that formed by the peritonæum which was partially divided as exploratory and exposed to view, what was instantly recognized as a large encephaloid sarcoma growing from the fundus of the uterus. Before proceeding farther with the operation, I called for a brief consultation, suggesting the immediate closure of the abdominal wound and abandonment of the operation, but the decision was to proceed and remove the entire uterus with the tumor, as the complete destruction of both ovaries, broad ligaments, fallopian tubes and all uterine appendages, with already, perhaps, extension to the sigmoid flexure and bladder, of the disease, rendered it an impossibility for the poor woman to survive such extreme destruction of important organs more than a few days if no operation had been attempted. Further exploration revealed an enormous encephaloid mass deeply imbedded in the fundus uteri at its base and extending above the umbilicus attached throughout to the peritonæum from the edges on both sides of the abdominal incision to the spinal column, also to the omentum, transverse colon, lower border of the left lobe of liver, base of bladder, sigmoid flexure and rectum, with the interspaces of the abdominal and pelvic cavities filled with acetic fluid.

The adhesions were, however, easily broken up by the hand with the occasional aid of the probe, peeling off like an orange, except that of the omentum,

which necessitated the ligation of a portion of omentum, requiring three ligatures, and cutting off the portion attached to the tumor. Though the adhesions to the bladder embraced nearly the whole body of that viscus, and their detachment embarrassed me much, yet by careful manipulation and gradual enucleation with fingers, was successfully broken up without wound or injury to the organ. There were no remains of either ovary, broad or round ligaments or fallopian tubes—all had been destroyed by the disease. The uterus was enormously hypertrophied—both body and cervix, by interstitial infiltration of cancerous deposits.

The upper portion of the tumor was so soft and brain-like that it required the most delicate handling to keep it from breaking into fragments and distributing them in the peritoneal cavity. After all attachments were severed, Dr Sergeant raised the entire mass, including the uterus, from the cavity and held it while an ordinary perineal needle, armed with a double ligature of several strands in each of strong saddler's silk, was passed through the cervix at the vaginal junction, when the cervix was ligated bilaterally and then *en masse*, and amputated with probe-pointed bistoury just below the internal os. There was no hæmorrhage from the stump, it having the usual gray appearance of uterine muscular tissue, but much more anæmic in appearance.

The cavity was as carefully sponged out with new sponges, previously rendered "aseptic," as possible, and the abdominal incision closed in the usual way, except that carbolyzed silk was employed instead of silver wire, as in case one. The shock was so profound that it was impossible to put the woman to bed, and bottles of hot water were packed around and over her where she lay on the table, and blankets piled on her, hypodermics of ammonia and whiskey given, and every effort employed to establish reaction, which, for the space of at least one hour was considered doubtful, but at the end of this time, the pulse could be felt at the wrist, and slowly reaction was established. In answer to the question, "How do you feel, Mary?" in a distinct voice she expressed herself as feeling better than she had for several weeks. She was then put to bed, and after being there for some time, without speaking, she voluntarily expressed her gratitude to me for so much relief, and repeated that she felt very comfortable. So complete was the reaction, both from shock and chloroform, that one or two gentlemen ventured to express a hope of her recovery, and one was inclined to believe she would recover and live for a short time, but, of course, recovery was an impossibility, short of miraculous interference. Quinine, as is my habit previous to any operation, had been given in large doses for several days before the operation, and now one-third of a grain of morphia, with a full dose of the cinchona salt, was given in whiskey. At the end of three hours, she was left in care of a sister only, as I had no hope she could live over two or three hours longer. Wonderful as it was to all who witnessed the formidable character of the operation required to remove such a mass, with such wide spread adhesions, and such destruction of intra abdominal

and pelvic tissue, that she did not die before the operation was completed—which occupied fully one hour—yet, as I am informed by her colored friends and watchers, she lived in comparative comfort until 3 o'clock next morning, and died without seeming to suffer, from their description, “that she only complained of weakness,” I presume from exhaustion. The operation was completed at 11 20 A M, Nov 20th, and she lived until 3 A M of the 21st, being nearly 16 hours.

In reviewing the history of the case after the recovery from malarial fever, and especially the cachexia, I am at a loss to understand why malignant disease did not impress itself upon my mind so firmly as to make the diagnosis clear as to the character of the growth before, as it was made at the—I had nearly said, post-mortem—it was next to it, simply an ante-mortem examination.

I am satisfied we did wrong in yielding to the pleadings of the patient for the operation, and, under the same circumstances in future, would be firm in my refusal to operate, but there is some excuse, on the other hand, looking upon the growth as non-malignant, and satisfied, from the rapid emaciation and dyspnoea, that death was certain in a very short time, and though the result was expected, yet there might be a chance of life by its removal, there certainly was none if it remained.

It is next to impossible to correctly and certainly diagnose cancer of the body, or fundus of the uterus, of the os or cervix it is comparatively easy. But when it is made, in either case, is certainly cancer in any form, even epithelioma of the os and cervix, I agree with Dr A Reeves Jackson, of Chicago, in his recent very opportune and conservative address on ‘Extirpation of the Cancerous Uterus,’ before the American Gynecological Society, at its meeting in Philadelphia, Sept 18, 19 and 20, 1883.

Dr Jackson summarizes thus

1 “Diagnosis of uterine cancer cannot be made sufficiently early to ensure its complete removal by extirpation of the uterus.

2 “When the diagnosis can be established there is no reasonable hope for a radical cure, and other methods of treatment, far less dangerous than excision of the entire organ, are equally effectual in relieving suffering, retarding the progress of the disease, and prolonging life.

3 “Extirpation of the cancerous uterus is a highly dangerous operation, and neither lessens suffering—except in those whom it kills—nor gives reasonable promise of permanent cure in those who recover. Hence it fails in all the essentials of a beneficial operative procedure, and *should not be adopted in modern surgery.*” Italic mine.

In cancer of the cervix, I think the doctor is in error when he says it cannot be made sufficiently early to ensure its complete removal by extirpation of the entire organ, but its extirpation is of itself too dangerous to risk, even if the entire removal of the disease was the result. In his third proposition he is again in error, when he says it “never lessens suffering except in those it kills.” If they survive the operation the suffering is abolished until the return

of the disease. This I have a knowledge of in one case that was exempt from suffering for three months, when the disease returned, and the woman suffered as before, until death finally relieved her *permanently*, which I believe is the only certain and permanent relief for any case of *true uterine cancer well developed*.

I have treated several cases of cancer of the cervix by curette and caustics, and prolonged life, and lessened to some considerable extent the suffering, and in one case was urged by the patient to remove her womb, and refused. But in this case, as in the others, the diagnosis was certain. But in the case here reported, cancer had only dimly floated in my diagnostic calculations. Though I regret the operation was not abandoned when the true nature of the growth became known, yet I have no reproving of conscience on the score, for I know we did not shorten her life over twenty-four hours, and we gave her sixteen of ease and comfort, which was more than an equivalent for all the time she would have lived and suffered “a living death.”

The tumor, after being conveyed seven miles in a buggy, weighed 18 pounds. Much of it was detached and lost. I think it would have weighed, as tumor and uterus, without regard to fluid contents, at least 25 pounds, or perhaps 30 pounds. It was sent to the Museum of the Medical Department of University of Louisville, Ky, and handed over by my friend, Dr D W Yandell, to Dr H A Cottell, for microscopical examination, who has very kindly furnished me a synopsis of its microscopic structure, as follows:

March 7th, 1883.

DEAR DOCTOR.—Dr D W Yandell is out of the city, expecting to be absent for six weeks. Your postal of February 23rd, with the tumor, has been referred to me by Dr W O Roberts. I will submit the specimen to microscopic examination, and report results as soon as practicable.

Yours very truly,

H A COTTELL.

LOUISVILLE, KY, March 21, 1883.

S P THOMAS, M D

Dear Doctor.—A microscopic examination of the pathological specimen received from you February 23rd, 1883, warrants the following statement: The large, denser mass is a fibroma (the uterus itself). The softer, appendant portion is sarcoma, of the small round cell type. The latter is commonly called encephaloid sarcoma and with the exception of the alveolar variety, is the most malignant of the sarcomatous growths.

Yours very truly,

H A COTTELL.

In conclusion, gentlemen, some apology is perhaps due you for the imposition upon your time and patience of this long report of two unsuccessful cases in surgery. But they were reported first because they were unsuccessful as I believe it is the duty of surgeon or physician to take more pains in reporting his failures than his successes because the latter are much more certain to report themselves, and are former are seldom heard of—and a

deter others from a procedure that would have the same result, if not teach them to improve on your methods or avoid your blunders and mistakes. At least I am certain if all operations in this comparatively recent field—abdominal and pelvic surgery—or operations involving the opening of these cavities, were more faithfully and truthfully reported, not only the statistical tables would be more reliable than they are at present, but many might be prevented from encouraging the evident, bold, and often reckless tendency of the present day surgery. The case of ovariectomy is reported because of the evident cause of death aside from the operation, and the case of hysterectomy specially on account of the errors in diagnosis, and to condemn it and all similar operations, and because, as far as my observation extends, and that of several well posted surgical statisticians, it is the first laparohysterectomy ever performed in the State of Kentucky, certainly the first reported

CORONERS AND MEDICAL EXAMINERS IN CONNECTICUT

BY GUSTAVUS ELIOT, A M , M D , NEW HAVEN, CONN

Perhaps nothing has occurred during the past year of more general interest to the medical profession in Connecticut than the enactment of a new law concerning coroners. The desirability of a change in the methods of conducting inquests had long been apparent, when in May, 1879, the subject was brought to the notice of the Fellows of the Connecticut Medical Society. At that time the President, Dr C M Carleton, of Norwich, in his annual address, called the attention of the Fellows to the facts, that the conduct of coroner's inquests had long been a subject of ridicule and contempt, and that Massachusetts had lately made radical changes in the laws governing these proceedings, which had gone far toward the reformation of abuses. He therefore recommended the appointment of a committee to examine the workings of the Massachusetts law, and "to urge upon the legislature of Connecticut the necessity for reform in the same direction." Accordingly, a committee of three was appointed, the members of which were instructed to investigate the adaptability to Connecticut of the Massachusetts system, and to report at the next annual convention. They were also authorized to visit Massachusetts for the purpose of studying the practical working of the system, and to bring the subject before the legislature.

The ancient law, to which Dr Carleton alluded so irreverently, empowered "any justice of the peace" to cause to be summoned "a jury of twelve judicious men," "to enquire of the cause and manner" of death of any person who shall have come to a sudden or unnatural death, or should have been found dead, the manner of whose death was unknown. The verdict of this jury was required to be presented to some justice of the peace, who in turn was required to return it to the next Superior court in the county. Small fees, none of them exceeding one dollar, were established, which were paid from the town treasury. Slight penalties were prescribed for neglect on the

part of officers in serving warrants, as well as for failure on the part of those summoned as jurors, to appear and serve. Provision was made for enforcing the attendance of witnesses, and for taking testimony, in the same manner as in criminal prosecutions before justices of the peace.

The committee, whose appointment has been mentioned, reported at the annual meeting of the Fellows of the Society in 1880, that they had visited Boston, and had enjoyed every facility for examining the system of medical examiners in successful operation there. They were thoroughly convinced that it was a most excellent one, and very much to be preferred to the present coroner system, and yet, strange to say, they concluded that "it was not at present advisable to attempt the introduction of the system into this State," and that "it would have been ill-advised to have brought any bill pertaining to the subject before the last State legislature." This report was accepted, and the committee discharged. But the agitation was not destined to end here.

Two years later, at the mass meeting of the members of the Connecticut Medical Society, Dr George L Porter, of Bridgeport, again introduced the subject. At the conclusion of an essay on the "Recognition of Death," Dr Porter urged that "the community should recognize that it is an unscientific distribution of political power to elect or appoint any one to the office of coroner who is not a medical man of good standing," and that "the State should change its present laws, under which the vagaries of 'crowners' quest law' have been possible, a method which has long since been recognized as ill adapted to its purposes, and which in practice is neither economical, wise, nor satisfactory, and in its place enact some ordinance by which the first official duties to the dead shall devolve upon properly constituted medical inspectors."

A resolution was passed unanimously "that a committee of five be appointed by the President, charged with the duty of bringing before the attention of the next legislature of the State the great importance of a change in the laws providing for the detection of crime, and particularly to change the laws respecting the appointment and duties of coroners, and to advocate the appointment of medical examiners."

The subject at length came before the legislature, at the January session, 1883, and the new law was finally approved May 1, 1883.

The provisions of this law are substantially as follows. The judges of the Superior court, every third year at their annual meeting, shall appoint for each county, upon recommendation of the State's attorney for the county, "a coroner, who shall be an attorney at law residing in the county, familiar with criminal practice and medical jurisprudence." He may, for cause shown, be removed by the judges, and the vacancy filled by them as in the first instance. He is required to furnish a bond of \$3,000 for the faithful performance of the duties of his office.

"The Coroner shall appoint for each town of the county an able and discreet person, learned in medical science, to be Medical Examiner." Each Examiner is required to give a bond of \$1,000 to the

Coroner for the faithful discharge of the duties of his office, and holds his office at the pleasure of the Governor

"When any person shall come to a sudden or untimely death, and when any person shall be found dead, the manner of whose death is not known, any one who shall become aware of such death shall forthwith report the same to the Medical Examiner of the town in which the dead body lies," who shall immediately proceed to view and take charge of the dead body

If, upon examination and inquiry, the Medical Examiner is satisfied "that the death was not caused by the criminal act, omission, or carelessness of another or others, and that there are no suspicious circumstances attending the same," he shall give a certificate of death in the usual form to the Registrar of Vital Statistics. He shall also mail or deliver to the Coroner of the county a certificate that an inquest is unnecessary

If, on the other hand, the Medical Examiner is suspicious that any one is criminally responsible for the death, "he shall as speedily as possible, by telegraph, telephone, or otherwise, notify the Coroner for the county of such death, and of the place where the dead body is lying. Whenever the Coroner has such notice, he shall at once, and on other notice may, proceed to view and take charge of the dead body, and make all proper inquiry respecting the cause and manner of the death." If he concludes that no one is criminally responsible, he shall return a certificate of death to the Registrar of Vital Statistics. If on the contrary, he has reason to suspect such responsibility on the part of any one, "he may cause an examination or autopsy to be made of the body by the Medical Examiner, or by some other competent surgeon or physician," who shall render a written account of everything which is likely to throw any light upon the identity of the body, or upon the time, manner, and cause of death. "Should the Coroner deem it necessary, he may by warrant cause a jury of six judicious men of his county to be summoned before him, to assist him in his investigation." These men the Coroner shall instruct in their duties, and as to all points of law that may arise at the inquest. He also "may order any inquest or any part thereof to be held in private, in which case only the persons by him designated shall be allowed to remain in the room or place where such inquest is being held." If the verdict in any inquest charges any one with having caused the death which is the subject of the inquest, the Coroner shall at once communicate the import of the verdict to the prosecuting officer of the town or city in which the death occurred. He shall within ten days return to the clerk of the Superior court the testimony of the witnesses, his own report, and the certificates sent him by the Medical Examiners. He shall, in addition, keep a complete record of all certificates made by the examiners, of all investigations made by himself, and of all testimony given before, and verdicts rendered by, juries or inquest.

Extensive powers are granted to the Coroner in regard to the summoning of witnesses and causing ar-

rests in order that no means may be neglected of detecting those who are criminally responsible for unnatural deaths. In cases where wounds and injuries are received for which others are responsible, if death threatens, the Coroner shall take the statement of the person concerning the manner in which and the person by whom the injuries were inflicted. If, in any case, it appears necessary to the Coroner to have a chemical or microscopical analysis, or other scientific investigation, for the purpose of ascertaining the cause of the death of the person on whose body he is holding an inquest, he shall so report to the State's attorney of his county, who may order such analysis or investigation to be made.

The medical examiners receive ten cents a mile for travel, five dollars for an external examination and twenty dollars for an autopsy. The Coroner receives fifteen dollars a day when necessarily employed, and forty cents a page for making the necessary records and copies. These fees are paid from the State Treasury, the bills therefor having first received the endorsement of the State's attorney.

The most striking feature of the new system is the marked tendency toward centralization. This is made apparent in the first place by the withdrawal of the authority of holding inquests from the numerous local officers elected by the voters of each town, and the placing of it in the hands of a few (eight) men who are appointed by the judges of the State. The fact that the appointments are made upon the recommendation of the State's attorneys, thus making the whole system, directly subordinate to the prosecuting office of the county, points in the same direction. Another striking feature of the system is the exceedingly insignificant position occupied by the Medical Examiner as contrasted with the unusual range of action granted to the Coroner. While the latter officer can be removed by the judge "for cause shown," the Examiners, on the other hand, hold office "at the pleasure of the Coroner,"—a strangely uncertain tenure of office. Even where an Examiner has undertaken an investigation the Coroner may at any moment interrupt the inquiry and take entire charge of it himself. If the Examiner finds reason to suspect criminality the Coroner still has the privilege, if he sees fit, of returning a certificate of death from natural causes, as if he were more competent than a physician to determine the cause of death in a doubtful case. Not even is the making of an autopsy ensured, as a definite prerogative, to the lawfully appointed Medical Examiner, but here again the Coroner may supersede him by calling upon some one else to do it.

The law went into practical operation about the first of July. Time will undoubtedly show its defects, and, if it has any, its advantages.

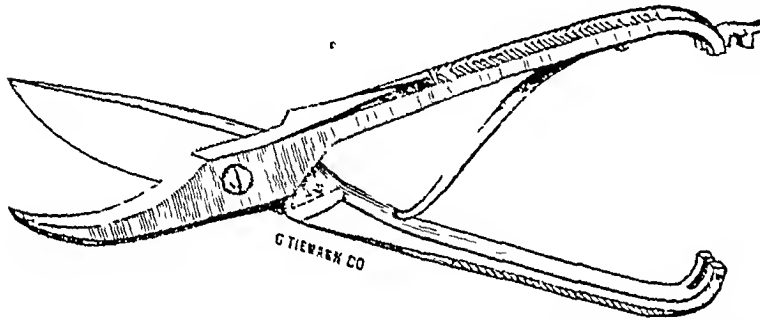
THE COSTATOME IN EXCISION OF THE RIB.

J. F. BALDWIN, M. D., COLUMBUS, OHIO

Being called upon recently to excise a portion of a rib, in a critical case of chronic empyema in which closure of the pus cavity, which I had previously freely opened, was prevented by inability of the chest

will to further retract I took occasion to review the different methods in vogue for the performance of this operation.

The incision through the flesh is of course easy, nor is the peeling off of the periosteum difficult, but it is not so easy to cut through the bone and at the same time not injure the soft parts. The chain saw, the Hei saw and the trephine are the means usually employed to cut the bone, the soft parts being held aside meantime by retractors or by a strip of leather, pasteboard or flexible metal passed behind the rib. None of these methods however are free from objections, chief among which are the time required, the difficulty of protecting the soft parts, and the necessary presence of more or less bone dust in the wound. The ordinary bone forceps or cutting pliers is better but its points are objectionally sharp while its shape is such that the blade cannot be easily passed between the ribs especially when they are closely approximated as in the retracted thorax of chronic discharging empyema. I therefore hit upon the *costotome* as being entirely efficient and at the same time free from all objections. The *costotome*, a cut of which



appears herewith is furnished with the more complete post-mortem cases and is designed for opening the thorax.

The operation alluded to was performed July 26, 1883 with the assistance of Dr. N. R. Coleman of this city, and Dr. S. I. McCurdy of Dunison, Ohio. The usual incision was made and the periosteum peeled off, the blunt lower jaw of the *costotome* was then forced in below the rib and then up behind it when the jaws were closed and all present were surprised at the ease with which the bone was severed. The jaws of the instrument were again opened and pushed along the rib to the other extremity of the incision when on closing them the operation was completed.

Owing to the spongy structure of the bone with its diploe and to the peculiar cutting angle of the instrument the rib is severed with much greater ease than is the phalanx in amputation of a finger with the bone pliers.

I may add in passing that the patient although greatly reduced by five months of suppuration rallied promptly after the operation, in six weeks the cavity was entirely closed and at present the patient is apparently as sound and well as ever.

MEDICAL PROGRESS

POISONING BY CAUSTIC ALKALI—FEEDING BY RECTUM FOR 49 DAYS—Dr. McDougall, in charge of the Kulingzu' Hospital, Amoy, furnishes the *Customs Gazette* with the notes of a case of attempted suicide in a woman by swallowing an ounce of caustic alkali. Vomiting ensued almost immediately, the vomited matter containing a good deal of blood. Three days later the patient was admitted into the hospital very weak and pale, eyes sunken, and lips, tongue, palate and mouth covered with sloughs. Deglutition being impossible she was given frequent nutrient enemata amounting in the day to fifty or sixty ounces of beef tea, eggs and milk. The enemata were retained for three or four hours. After the mouth and throat got well the patient made frequent attempts at deglutition, but without success. On the 45th day a small sized bougie (after many unsuccessful efforts) was passed through one stricture at about the level of the thyroid cartilage but after passing six inches beyond this point it stopped and subsequent attempts at getting it lower proved fruitless. On the 40th day the patient for the first time swallowed a little congee (?) and milk. This was followed by great pain in the stomach. The quantity was increased every day until a week later she swallowed a large tumblerful of beef tea and the same quantity of milk. The rectal injections were continued. Her master took her away the next day and four weeks later came the news of her death. It is most probable that the cessation of nourishing enemata and the absence of

any sufficient food that she could swallow simply brought on death by starvation. She lived for 49 days without swallowing the smallest quantity of food, either fluid or solid, and derived so much nourishment from the enemata that she actually gained in weight.

NOTES ON AN EPIDEMIC DISEASE OBSERVED AT PAKHOI—Dr. J. H. Lowry, in the *Customs Gazette*, gives a general consideration of the history of *bubonic plague* as given by various authors, and as preliminary to his clinical notes of ten cases of an epidemic disease which he considers as being closely allied to the bubonic plague. The population of Pakhoi where his cases occurred is set down at 25,000. The mortality was between 400 and 500 during three months, from the end of March to the end of June 1882. He describes the hygienic condition of the town as exceptionally bad, the streets in an abominable condition of filth, not the slightest attempt at cleanliness, the privies open and placed for convenience in the most frequented parts, every house damp and foul, and the floors excrement-sodden. He gives the symptoms of his ten cases out of which two recovered in the following order: 1. High fever; 2. Glandular swellings or buboes, varying in size from a large betel nut to a hen's egg, seldom more than one present, hard and painful, do not suppurate,

groom most frequent site 3 Sallow hue of skin 4
 Heavy odor from breath 5 Pulse small and weak
 6 Bilious vomiting 7 Most cases great prostration
 8 Tongue varied, mostly dry, white fur 9
 Sordes on teeth and lips 10 Delirium 11 Restlessness
 12 Respiration somewhat hurried 13
 Bowels loose, fetid odor, no diarrhoea 14 Præcordial oppression
 15 Thirst not intense 16 Drowsiness passing to coma
 17 The young more frequently attacked 18 Incubation appears short
 19 No eruptions were observed 20 Great mortality among rats, no other animals attacked

He regards this as a filth disease, and influenced by high temperature, during its prevalence the thermometer averaged a day temperature of 85° , and a night temperature of 76° . He classes it as a specific contagious fever, of short duration, accompanied by glandular swellings, and very fatal. On first seeing the cases they resemble closely typhus fever.

THE PRESERVATION OF BODIES—Dr J. Polak, of Warsaw, has for some time past been employing an aqueous solution of sublimate for the preservation of cadavera. It is used in the proportion of 1 to 500, or 1 to 300. He claims that better results are obtained from the employment of this salt of mercury than from thymol, as ordinarily used, *i. e.*, thymol 3 parts, glycerine 2,000 and water 1,000, and that, being at the same time much cheaper, it is to be preferred. The injections are made in the ordinary way, through the carotid or femoral artery, and no special appliance is needed.—*Medical Press*

MARKED REDUCTION OF TEMPERATURE AFTER HÆMORRHAGE INTO THE MEDULLA OBLONGATA—Dr C. Lemeke reports a case (*Deutsches Archiv für Klin. Med.*) as coming from the medical clinic of Prof. Thierfelder, where there was primary hæmorrhage into the medulla oblongata, followed by a most remarkable reduction of temperature.

The patient was 38 years of age, a blacksmith and a drunkard. His habits were uncleanly, his abode unhealthy and his nutrition poor. On October 24 he came home drunk and went to bed. October 26 his wife reported that he no longer recognized her, could not speak or swallow, but had rattles in his throat and froth came out of his mouth. He was brought to the hospital on a stretcher, when a record of his case was taken. No deformity in the robust body, no bloat in the face, cheeks red, good color to the mucous membrane, no smell of liquor, but a most remarkable coldness to the skin of the whole body, feeling like a cold corpse, no cyanosis or œdema, even in the parts pressed upon in lying. With this was a remarkable diminution in the frequency and force of the heart's action. The radial pulse was altogether wanting, the carotid pulse was very feeble, the number of beats of the heart as marked at the apex was 38 per minute, the breathing was labored and stertorous, but regular 18 per minute. No ptosis on the left conjunctival bulbi and an ecchymosis of the size of a small pea. Left pupil a little more contracted than the right both reacting sluggishly on exposure to light. Cervical

muscles pliable, no enlarged glands, reflex irritability more marked on the right side, the sensorium deeply affected, the patient answers no questions, loud calls arouse him momentarily, the eyes stare into vacancy, and no notice is taken of what goes on about him, the limbs are passively limp, swallowing is not possible.

After having been given a bath of 28° C, for cleanliness, and placed in a warm bed, the thermometer, at 9 P. M., was placed in the rectum for a distance of 6 centimeters and remained there 15 minutes, when it registered exactly 23° C. After the bladder had been emptied, and an enema given, which brought away hardly any fecal matter, about every six hours stimulant enemata of port wine and camphor were administered, with subcutaneous injections of æthyl sulph. The thermometer gave the following record:

October 27, 2 A. M., 25.5° C (rectum), 7 A. M., 26° C, (rectum), 10 A. M., 26.7° C (left axilla—in place for an hour), 2 P. M., 27.5° C (rectum), 5 P. M., 27.7° C (rectum), 9 P. M., 28° C (rectum).

Heart beats, October 27, A. M., 32 per minute. About 10 A. M. the respiration became of the Cheyne-Stokes character. Arms flexed to a right angle and contracted, shoulders limp, legs limp, no contraction, on grasping them especially the left, there is evident appreciation of pain, the reflex irritability of the left has become less marked, urine passed in bed, towards evening the heart beat 40 per minute, and death took place at 11 45 P. M., with 37 per cent œdema of the lungs.

The post-mortem made twenty-four hours later was very thorough, the interest centered in the brain and medulla, a considerable amount of clear serum was found in the subarachnoid space, the pia mater was lifted up into bullae by the underlying serum, the medullary and gray substances of the brain were strongly injected with blood, ventricles not abnormal. The medulla was carefully removed and examined by transverse sections. The first important change was noticed 7 mm. below the calamus scriptorius, where there was marked hyperæmia and dilatation of the vessels on the left side, further to the left from the central canal and from the caput columnæ post., were the vessels doubled in size and filled with blood—no hæmorrhage. From this locality to the middle part of the medulla oblongata, the hyperæmia became less marked until nothing abnormal was seen beyond a slight thickening of the tissue about the central canal. The transverse sections through the middle portion of the medulla, which showed clearly, delineated the nuclei of the hypoglossal and accessory nerves, gave their cells unusually marked in pigmented, especially the left. From here on the hyperæmia became more marked again with each transverse section until at the left side near the median line and on the surface of the floor of the fourth ventricle, were the first traces of a fresh hæmorrhage, which led to a deposit further on, which lay more to the left of the median line and 1½ mm. beneath the floor of the fourth ventricle, it was 4 mm. in extent from the middle of the olivary body to the point of the rhombencephalon extending to the

mentioned depth to directly under the ependyma of the fourth ventricle, pressing it upwards, its breadth measured $1-1\frac{1}{2}$ mm. Relatively, it was placed lateral to the nucleus of the bulb, above the nucleus of the vagus and somewhat below the median portion of the nucleus of the auditory nerve. The examination was carried further with interesting results, but as the question here has reference more particularly to the relation between the hæmorrhage in the medulla and the lowering of the temperature, it is not necessary to give further details.

Here is the case of a man who within three days of his death showed no special change in his physical condition from that of a previous indefinite period, he suffers from primary hæmorrhage of the medulla oblongata, and his case is classed as acute apoplectic-form bulbar paralysis, which is recognized as such through the complete anarthritis (injury to the N hypoglossus), the dysphagia (affection of the nuclei of the Nn hypoglossus, glosso-pharyngeus and vagus-accessorius), the diminished pulse-rate (irritation of the nucleus N vagi), the labored respiration, which became of the Cheyne-Stokes form (symptoms of a clot in the immediate neighborhood of the respiratory center), and the enfeeblement of motor force in the extremities, which Nothnagel considers as often the only symptom of a bulbar clot. The extraordinary lowering of the temperature gives rise also to the conclusion that certainly the locality of the lesion was in close connection with the seat of the thermic centre.

SUPPRESSION OF URINE FOR EIGHTEEN DAYS — A fatal case is reported from Warsaw of a railway conductor, 45 years of age. The patient was admitted into the Child Jesus Hospital, Warsaw, on February 8, of the present year. He had then suffered for five days with complete anuria. From time to time one or two drops of mucus had passed the urethra. For two days no movement of the bowels had taken place, there were meteorismus, eructations, dull pain in the kidney region, headache, sleeplessness and restlessness. The patient attempted to evacuate urine three or four times in the hour, but without success. The pulse was weak, 100, temperature, 37°C , no urine came away on passing the catheter. Warm irrigations of the bladder, purgatives, extraction of blood from the kidney region, and warm baths produced no alteration. On the 12th of February vomiting set in, which lasted several days. The catheter was passed every second day, but yielded no urine. The vomiting became more frequent, and pyrexia set in, 38.50°C . On the 21st of February, for the first time, an ounce of urine was passed, and on the 22d, one and one-half ounces. The patient became still worse, and died on the 23d, after eighteen days of acute suffering. The autopsy showed widening of the calyces. In both ureters calculi were found, which completely prevented the passage of urine. The bladder was empty and contracted. No mention is made of uræmic (so called) convulsions. — *The Medical Press*

POISONOUS FISHES — We find in the *Mémoires lus à la Société de Biologie*, an article by Ch. Remy, on

the poisonous fishes of Japan. The article is not yet complete, but so far as published, it embodies the results of valuable researches. It appears that in Japanese waters there are no less than twelve varieties of fishes that are suspected or known to be mortally poisonous. Five of these are so virulent in their poisonous effects that their sale is interdicted by the Japanese government. The Japanese give them the name of *fougou*. Their flesh is exquisite in flavor, and their poisonous qualities are most developed in the spring time. The scientific name given to them is Tetradon, and they are also found at New Caledonia. M. Remy conducted a series of experiments on animals with these fishes, by feeding and injecting subcutaneously the flesh and viscera, watching the symptoms and noting the post-mortem evidences, from which he concludes that the poison resides exclusively in the genital organs, and principally in the ovaries, and further, that the toxic force of the fish is proportional to the development of the genital organs. The second part of his article, which is not yet completed, refers to the clinical history of cases of poisoning by these fishes in man.

SPIRITUS ETHERIS NITROSI — Dr D. J. Leech, not being satisfied with the scanty physiological and therapeutic records of this drug, has undertaken to define its effects more clearly and positively, and in the *Practitioner* gives the results of his investigations, as proving it to be a distinct depressor of arterial tension, finding that 100 minims of spiritus etheris nitrosi given to a healthy man invariably indicates in the sphygmographic pulse-tracing, a marked fall in arterial tension, and that this decreased tension lasts for two or three hours. Its action is evidently analogous to that of nitrite of amyl, and it probably influences the same tissues. As a diuretic, its success is due to its tension-reducing effect, and this also explains its failure as a diuretic in cardiac dropsy. In elderly people, its chief value would lie in counteracting the increased tension consequent upon tissue degeneration. The connection between its influence on tension and its diaphoretic effect, may enable us to judge of the probability of its usefulness as a diaphoretic in individual cases. It is evident that it may cause a tense small pulse to become fuller and stronger to the feel, and quicker. The heart's beat, too, may become perceptible to the patient under the influence of the ether, as it often does after the exhibition of amyl nitrite, and the change which it effects in the circulation may also account for its utility in certain nervous symptoms in children, to which Wood calls attention.

NOTES ON THE ADMINISTRATION OF QUININE — As the result of the experience of a practice of eleven years in Rome, Dr David Young gives (*Practitioner*) his experiences with this drug, especially detailing two cases. One an English lady, aged sixty years, who returned to her hotel cold, wet and tired after an exhaustive day's sight-seeing. The physician called in attendance considered the symptoms present and suggested the use of quinine, which was ordered (bisulphate) in six grain doses every four hours. After the fourth dose, headache increased, noises in

ears and deafness. After the sixth dose, violent nose bleeding. After the seventh dose, convulsions, followed by death. The second case was in a young Englishman similarly affected, who was ordered the drug in eight grain doses every six hours, the second dose produced marked cinchonism, and during the night he became wildly delirious, which continued until the third day the quinine was stopped, the bowels which had been bound for 48 hours were evacuated by the use of calomel, and the urine, previously very scanty, discharged freely, when sleep ensued, with freedom from delirium. The case proved to be one of typhoid fever. Dr. Young summarizes other cases, and concludes as follows:

I. Never give quinine in antipyretic doses in cases where the bowels are confined and the secretion of urine is scanty.

II. In cases where it is being administered and an increase of dose is desirable, this may be safely done if the skin, bowels and kidneys maintain their normal functional activity.

III. In many cases of remittent and intermittent fever, the combination of the drug with the chloride of ammonium or a salt of potash or soda, is likely to be more easily tolerated as well as more useful, than if it be administered in a pure form.

IV. During the administration of quinine, should a headache come on or increase in intensity, the case requires the most careful attention.

ON THE ACTION OF AGARICIN IN THE NIGHT-SWEATS OF PHTHISIS.—The agaricus albus, of now almost obsolete reference, is growing upon the larch in the old country, and considered as an active purgative, has been recently brought into use from the fact that the chemists have extracted the active principle, in the form of long needle-shaped crystals to which the name has been given of Agaricin. Andrel found the agaric in powder in doses of eight grains, gradually increased to a drachm, useful in the night sweats of phthisis. And now Dr. Otto Seifert calls our attention in the *Weiner Medizinische Wochenschrift* to the agaricin as used for the same purpose. It is not positive in its action and must often be given in increasing doses, but it induces sleep, relieves cough and lowers the pulse. According to Dr. Seifert's experience, a full dose exerts its influence during five to six hours, when, knowing the period for the onset of the sweats in phthisis, it must be renewed for that purpose. He gives the drug in doses of 0.004 to 0.02 gramme, and has met with success by using it hypodermically, his formula being: Agaricin, 0.05; alcohol abs., 4.5; glycerine, 5.5, producing a pretty severe burning sensation for half an hour. He gives preference to the internal administration.

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PUBLISHED WEEKLY

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer a full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, NOVEMBER 17, 1883

MEDICAL ADVERTISING.—In reply to the questions of our Virginia correspondent, in the preceding number of the JOURNAL, we stated with sufficient explicitness the manner in which any member of the profession could make known, both to the public and his professional brethren, that he practiced only in a limited field or department of medicine or surgery, etc., by saying on the ordinary professional card that his *practice is limited* to this, or that class of diseases. If it is proper for him to put it on his card, of course he can also put it on letter heads, or door plate, or even on a pine board sign, so far as the action of the American Medical Association is concerned. But it must be a simple notice of limitation of business and not a claim to special or superior qualifications.

The question he has raised in regard to "clinics, private homes, retreats," etc., etc., is of sufficient importance to justify a further consideration. That much special advertising has been done in this indirect manner is obvious to all. How far this advertising is in violation of the principle involved in the prohibitory clauses of the National Code of Ethics has never been authoritatively determined. As in the case of specialties, so here, the Code of Ethics makes no direct mention of such institutions. It simply prohibits the medical man from publicly offering his services to the poor gratis, from such advertising as is intended to invite the attention of those laboring under particular diseases, and from boasting of specific remedy or extraordinary cure. Neither has the ethical relation of the class of institutions ever been determined by any direct action of the American Medical Association. Consequently,

our learned confrère at Richmond could analyze the various institutions to which he has alluded and determine how far their advertising contravenes the plain principle on which the prohibitory clauses of the Code are founded, with as much propriety himself, as to call on his "venerable and honored brother," to do it for him. We have no objection, however, to rendering him such aid as time will permit.

First, let us determine the nature of the sanitariums, homes, retreats, etc., etc., to which allusion has been made. There are some maladies that afflict members of the human family of such a nature that the proper care and safety, both of the afflicted and of the community, actually require special provision for their care and proper treatment. Such are most of the forms of insanity, and of those mental and physical derangements produced by the habitual use of opiate and alcoholic preparations. Positive seclusion and some degree of restraint are essential to the successful management of these classes of cases. Consequently, there is need of both public and private institutions for their accommodation. And this carries with it both the necessity and propriety of such proper advertising as will make known their existence to the profession and the public. All of which can be done without, in the slightest degree, violating any principle of ethics. So, too, the establishment of true sanitariums or places for the accommodation of invalids at certain important sanitary localities called "health resorts," is very desirable, if not absolutely necessary. But the proper advertising of these does not necessarily involve the puffing of the name or skill of any member of the profession. Aside from the institutions we have now enumerated, there are numerous others, such as dispensaries, clinics, homes, retreats, asylums, institutes, etc., for the treatment of this, that, and the other special class of ordinary diseases, under the direct charge of Dr A, Dr B or Dr C, who has "long devoted special attention" to the class of diseases invited, that are so plainly devices for inviting the attention of those laboring under particular diseases, that no one can easily mistake their true relation to the acknowledged principles of ethics. That their establishment, and the system of both direct and indirect advertising connected with them, has already done much to disgust the profession at large, to lower the standard of professional honor in the estimation of the intelligent classes of the people, and to divert large numbers of patients from the care of their proper medical attendants, will be evident to anyone who will take the trouble to investigate the subject. The time has come when the subject should receive the earnest

attention of both State and national medical organizations. And as a "venerable brother" we would advise our correspondent, who is yet in the prime and vigor of life, instead of converting his house into a "private gynæcological retreat," to apply his well-known ability through that part of the medical press which he controls, to the work of creating a more active public sentiment in favor of pruning out the excrescences that are plainly disfiguring the features and corrupting the morals of the profession.

UNITY OF DIPHTHERITIC AND MEMBRANOUS CROUP—In the number of the JOURNAL for September 22d is a paper on this subject, read before the Section on Diseases of Children, by Alex. Harris, M.D., of Jeffersonton, Virginia. The paper as printed closed with the following unfinished sentence: "I have recently treated and lost a case." In reading the proof sheets the sentence was marked as unfinished, and diligent search was made for the remainder of the manuscript, but without success. The author has sent us what was omitted, which would make the paper complete as follows: "I have recently treated and lost a case of diphtheritic poisoning, when the only local manifestation was on the skin of the hand and arm for more than a fortnight, the pharynx becoming involved only about thirty-six hours before death. More than thirty years ago a neighboring practitioner saw one of my patients in whom I had diagnosed membranous croup (without reference to the condition of the fauces), and being a disciple of Wood, declined to make a diagnosis without an inspection of the throat. To my surprise, the inspection revealed membranous deposits on the tonsils and soft palate."

SOCIETY PROCEEDINGS

TRANSACTIONS OF THE OBSTETRICAL SOCIETY OF PHILADELPHIA

Stated meeting, November 1, 1883, the President, R. A. Cleemann, M.D., in the chair.

Dr B. F. Baer related the following cases, the clinical histories of which present some points which he thinks are instructive and worthy of discussion. They are somewhat unusual in character, and remarkable that they all occurred within a period of thirteen days.

FORCEPS LABOR FIFTH POSITION

On October 17th I was requested by Dr — to visit his patient, Mrs. H., who had been in labor thirty-six hours, prepared to perform craniotomy. She was a primipara, 43 years of age.

I found the patient nervous and exhausted, the soft parts dry and rigid, the os only partially dilated, and

the membranes ruptured many hours. The head, a large one, was in the cavity of the pelvis, and, whilst not impacted, it was nearly so. The larger portion of the head was posterior and to the left, the smaller portion anterior and to the right. The foetal heart-sounds were heard in the left lumbar region, and nowhere else. I therefore diagnosticated a left occipito-posterior, or fifth position of Baudelocque.

I placed a vectis, and endeavored to assist rotation forwards, but failed to make any impression. I next adjusted, with some difficulty, Simpson's forceps, and by traction during uterine action, with gentle efforts at rotation, allowing the forceps to turn as the occiput rotated anteriorly, that process was finally accomplished in about two hours of hard work. I now removed the blades, and after finding that the head could not be delivered without it, I readjusted the instrument and assisted in extension of the head, delivering a living child said to have weighed twelve pounds. There was no laceration of the perineum. Both mother and child have done well. The case is interesting because of the age of the primiparous patient, and in the position of the occiput, which is rare.

ARM PRESENTATION, PODALIC VERSION

On October 23d, Dr. ——— requested me to see a patient with him, a girl 16 years of age—a primipara at full term—in labor about twenty-four hours, and trunk presenting.

In general appearance she resembled more a child of twelve than a girl of sixteen. The external genitals and vagina were small and undeveloped. The abdomen was greatly distended, globular and fluctuating. Palpation was of only negative diagnostic value, probably on account of the large quantity of amniotic fluid. But I thought I detected the head in one iliac fossa, and the breech in the other. Auscultation revealed the foetal heart sounds, feebly heard in the right iliac region. The upper portion of the vagina was distended by a large protruding "bag of waters," and the os uteri was fully dilated. I could only slightly touch the presenting part, which was entirely above the superior strait. I detected what I thought to be a limb, and from what I had learned previously by inspection, palpation and auscultation of the abdomen, I believed it to be an arm. I then dilated the orifice of the vagina preparatory to passing my hand, should that be found necessary, after rupture of the membranes, which I now did, and found a shoulder presenting and an arm on the verge of passing the os. This I arrested, and made version by the feet. I preferred this to version by the vertex, because I deemed it easier and less dangerous to both mother and child to effect delivery in that manner, than to apply the forceps in this special case. The child was alive, but feeble. The body passed through the narrow vagina very slowly, and only after pressure on the fundus of the uterus, until the head reached the floor of the pelvis. Here by assistance, the occiput rotated forwards and the head was arrested. Flexion of the head could not be made to occur by supra-pubic pressure, and by pressure upon the nape of the neck, whilst a finger or two acted upon the anterior surface of the head through

the rectum. I then quickly adjusted the forceps, and carrying the handles forward with the body of the foetus, made flexion and delivered a living child. There was not the slightest laceration of the perineum.

The uterus did not contract well, and although ergot was administered, and time given for the organ to recover its tonic (thorough kneading being used meanwhile), when the placenta was expelled a smart post-partum hæmorrhage followed. This was easily controlled by the application of pure vinegar to the cavity of the uterus, injected by means of the long-nozzled uterine syringe, which holds about half an ounce. I prefer this method of introducing the vinegar to any other, for the reason that it is more easily and thoroughly applied. I carry the nozzle, guided by the index finger, as in the introduction of the sound, into the uterine cavity, and project the vinegar, without force, over the surface. This can be repeated if necessary, which is seldom. Too much praise cannot be accorded Prof. Penrose for his earnest advocacy of the use of vinegar in the treatment of post-partum hæmorrhage, the result of uterine inertia. In my experience, it has never failed to secure firm and continuous contraction, when properly applied. It is simple, antiseptic, and harmless.

ARM PRESENTATION, PODALIC VERSION

October 29th, Dr. — sent for me, stating that he had a case of shoulder presentation, that the membranes were ruptured, and the os only partially dilated. He had attempted to make version by the feet, and had brought down an arm in mistake for a foot. I found a primipara, æt 22 years, illegitimately pregnant, at full term, feverish and excited. A large, fat right arm occupied the vagina, and the shoulder was jammed into and projecting through the os, which was firmly contracted around it. It was a dorso-posterior position, and the head was in the right iliac fossa. All the liquor amnii had been drained away, and the uterus was closed tightly around the child, which was apparently dead.

We administered ether, and I at once began an effort to bring down a foot, deciding that version by the vertex here could not be made, because the arm could not be returned to the uterine cavity, and, even if the arm had not been down, I feel sure that the bi-polar force would not have been great enough to have brought that head to the superior strait. But to get through the narrow vagina and rigid os, which were filled already by the arm and shoulder, was one problem, and another, apparently greater one, was the turning of the large child in a contracted uterus. An attempt was, however, not only justifiable, but obligatory, for the sake of the child, of whose death we were not sure. Then, embryotomy, in a case of this character, would, I believe, have been attended with greater danger to the mother than version. I gradually inserted my hand and carried it into the uterine cavity, and with it I tried again to replace the arm, but failed. My hand was now so numb that almost all sensibility was lost. I finally reached the feet, selected the left one, and began my efforts to

internal manipulations, of course, by placing the external hand on the abdomen, and acting with it on the opposite pole of the child. When I made traction on the leg, the arm advanced further into the vagina, and it now seemed that I should certainly be compelled to give it up, the difficulties appeared so great. But patience and perseverance are cardinal virtues here, and by exercising them to my utmost capacity, I succeeded in getting the foot and leg into the vagina, where I secured them with a fillet. I now gave this to Dr ———, and whilst he made traction upon it, I pushed upon the shoulder, and succeeded finally in revolving the child on its long axis, causing the arm to ascend, and the leg to occupy its place in the vagina. The remainder of the delivery was that of a difficult breech case, where traction on the child and pressure upon the fundus of the uterus are imperative. The child was dead. The mother reacted well, and has not presented an untoward symptom. There was slight laceration in the sulci on either side of the vagina, not through the cutaneous surface, and not enough to require suturing.

BREECH PRESENTATION

Twenty-four hours later, on October 30th, my friend Dr Wm L Taylor requested me to see with him Mrs X, a primipara 35 years of age, who had been in labor 24 hours, the breech presenting in the left sacro-posterior position. The membranes had ruptured twelve hours previously, the os was rigid, and only slightly dilated, and the breech was impacted in the superior strait, which seemed to be narrow. The patient was short of stature, fat, and had a small vagina. It was thought that the child was dead, but of this we were not sure.

Was there any use in waiting longer for nature to effect delivery? We decided that there was not, and, I believe, correctly. An attempt at traction was made by acting on the thigh, but it was futile. I passed my hand with great difficulty into the cavity of the uterus which closely surrounded the child, and endeavored to reach a foot, but found that the legs were extended, and it was only after I had advanced my hand absolutely to the fundus of the uterus that I secured the desired member. The uterine cavity was now so rigid and full that it appeared impossible to flex the leg and extend the thigh. But here perseverance again succeeded, and the leg was brought into the vagina. Delivery was finally consummated by the greatest effort. The child was dead, and from appearances had been so for some hours, as Dr Taylor had suspected. The mother recovered as after an ordinary labor.

PUERPERAL CONVULSIONS

A few days before, October 21, there entered my service at the Maternity Hospital a girl, 18 years of age, illegitimately pregnant, and near term. She presented a depressed appearance, and was pale and puffy from œdema. Her urine was examined at once and found to contain a large quantity of albumen and some casts. Her labia minora were so œdematous that she walked with difficulty.

She was placed upon a treatment consisting of Basham's mixture, digitals, laxatives, and warm baths,

with good food. On the 20th, the nymphæ were so greatly distended that I feared obstruction to delivery, which was about to take place, I therefore made about a dozen small punctures over their surfaces. This was followed by a very free discharge of serum, so that in the evening the labia were reduced more than one-half. During the night, labor occurred, and she was delivered naturally at seven A M on the 21st, having been attended by my assistant, Dr J P Pyle. There were no symptoms during the labor nor immediately after it to attract attention, but before leaving her he administered thirty grains of the bromide of potassium as a safeguard.

At 9 o'clock he was hurriedly called, and found her just recovering from a convulsion. He at once sent for me, and began the administration of chloroform. But before I reached her, at 10 o'clock, she had had two more seizures, and just as I entered the room she went into another, which was one of the most terrific convulsions I have ever witnessed. I immediately opened a vein, and allowed about sixteen ounces of blood to flow. I confess that I did not want to take blood from this patient, because she was in such an apparently low condition. The bleeding did not seem to have the slightest effect, for very soon after it she had another convulsion fully as severe as the one preceding. Since the first attack there had been given, per rectum, twenty grains of the hydrate of chloral and forty grains of the bromide of potassium, and, per os, one-fourth of a grain of elaterium. But the convulsions continued to recur, unless the patient was kept constantly under chloroform, and coma was deepening with each attack. I now injected, hypodermatically, three-fourths of a grain of the sulphate of morphia. This was at 11 30 A M. She did not have another convulsion, although no more chloroform was administered until 2 P M. At this time she had a slight one, and at 2 30 another much more severe, when I repeated the dose of three-fourths of a grain of morphia. After this she had no more convulsions. The dose of elaterium was now repeated, and the kidneys stimulated by large doses of saline diuretics, administered by the rectum. The bowels moved freely and repeatedly soon after the last dose of elaterium was given, and the kidneys responded promptly, but the urine became nearly solid, when the test for albumen was applied, and casts were so numerous, and of such a character, that an unfavorable prognosis was pronounced by the competent microscopist who made the examination. The patient, however, came gradually out of the profound coma, but did not recover consciousness until nearly three days had elapsed, becoming at times wildly delirious and maniacal. As soon as she could swallow, I resumed the administration of Basham's mixture and digitals, and on the next day added quinine and ergot, the latter especially to restore tone to the capillaries, and thus assist in improving the condition of the brain. Milk and beef tea were given largely. The patient will leave the hospital to-morrow, although her urine still contains albumen in considerable quantity.

If uræmia is ever the cause of eclampsia (which is not settled), this case presented the kidney state

which is usually found in cases said to be of that origin

Since it is *apropos*, I will relate a case which was probably not of uremic origin, because the urine did not indicate the slightest disease of the kidneys

PUERPERAL CONVULSIONS

My friend, Dr J B Deaver, asked me to assist him in the delivery and treatment of a case of convulsions. The patient was eighteen years of age—a primipara, and unmarried. The occiput was posterior and in the hollow of the sacrum. The first convulsion occurred after the head had passed the superior strait, and it was a very severe one. Dr Deaver immediately bled, and very freely. Another convulsion occurred soon after the bleeding, although chloroform was administered and chloral given by the mouth. When I reached her, she had had three attacks, and was profoundly under the influence of the anæsthetic, and, of course, could not convulse in that state. I adjusted the forceps and delivered, with the occiput posterior, being unable to rotate it anteriorly. The anæsthetic was now removed, and not long after another violent convulsion occurred. I now injected two-thirds of a grain of morphia under the skin. She did not have another seizure and made an uninterrupted recovery. As stated above, there was not the slightest evidence of disease of the kidneys, either before or after labor. The cause here was reflex—the patient being predisposed by a depressed mental condition, etc.

The first indication to be met in the treatment of puerperal eclampsia should be to control the convulsions. I do not think it will be gainsaid that the prognosis becomes less favorable with each recurrence. I believe that morphia administered hypodermatically in a large dose, and repeated if necessary, is one of the most efficient means which we possess for that purpose. In the next case which I am called to treat I shall give one grain. I will bleed, if I think that is indicated, and shall use chloroform, but I will certainly give the morphia. I will then attend to elimination through the bowels, kidneys and skin. Dr Clark, of Oswego, N Y, first brought the morphia treatment before the profession, in a fearless and excellent paper, published in the *American Journal of Obstetrics* for January, 1880, which is worthy of study.

DISCUSSION

DR ELLIOTT RICHARDSON thinks the extent of dilatation of the cervix a very important point in considering the advisability of version in presentation. When the fœtus is in a transverse position, it cannot descend, and as the cervix dilates, it slips upward on the neck and chest of the child, and thus puts the vagina in a condition of longitudinal tension, and consequently of narrowing. Any sudden or extreme attempt at dilatation of the vagina, when in this condition, involves a great risk of laceration. In Dr Baer's case, the narrowness of the os uteri was a favorable circumstance for podalic version.

There is a wide difference in the treatment of puer-

peral convulsions, between this country and Germany. Carl Braun strongly discountenances bleeding, and recommends chloroform, with the administration of benzoic and citric acids, to assist the action of the kidneys. He considers that the prime object is to put the body at rest.

DR W T TAYLOR thought that in Case 2, if the method of Dr Wright, of Cincinnati, for the correction of the shoulder presentation, by converting it into a vertex, had been tried, the difficulties and dangers of a version by the feet might have been avoided.

He does not think bleeding should ever be omitted in the treatment of puerperal convulsions, in plethoric patients. Bleed freely, and give chloral in large doses, by the rectum. He thinks the use of opium should be preceded by bleeding.

DR ALFRED WHELEN has tried $\frac{1}{4}$ grain nitrate of pilocarpine, hypodermatically, after bleeding,—the result being successful. The use of the pilocarpine did not seem to be followed by serious effusion. In one case, in which no treatment of any kind had been used, an autopsy showed all the serous cavities filled with effusion. He thought the arterial tension consequent on the convulsion, was the cause of the exudation.

DR R A CLEEMANN had tried all plans, and none of them were certainly successful, every method would fail at times, and any method will be followed by recovery. He thinks bleeding should be tried in every case, to remove the vascular tension, which is the great source of danger.

DR B TRAUTMANN had under his care a primipara, plethoric, who was suffering from puerperal convulsions. She was bled, a large dose of calomel was given, chloral was administered, and pilocarpine was injected, but all without effect. The patient died. In another case the urine contained 50 per cent of albumen with casts, and no convulsion occurred. What is the relation between albumenuria and convulsions? Is the origin of the convulsion in the nervous system, and the albumenuria a result?

DR H F BEATES—The presence of urea in the blood being generally considered a prime factor, most of the forms of treatment have reference to its elimination. Bleeding should be very free, to act in that manner, and if it is prompt and free, it will be followed by improvement, pilocarpine acts as an eliminator of urea by the skin, thus relieving the kidneys and the system. He had treated two cases by this method, and both had recovered.

DR PHILIP M SCHIEDT had recently under his care a primipara, aged 25 years, she had convulsions for four hours, chloral and bromide of potassium had been given freely, but with no effect, a hypodermatic injection of $\frac{3}{4}$ gr of morphia sulphate was followed by quick relief, she was very plethoric, but there was no need for bleeding after the use of the morphia.

DR BAER, in Case 2, had considered version by the vertex, but thought that he could deliver more quickly, and with less danger to both child and mother by means of podalic version. He considered elimination a false principle in the treatment

puerperal convulsions First stop the convulsions, eliminate afterwards, if there be any necessity for it How much elimination can be effected by drawing twenty or even forty ounces of blood? The majority of these patients need all of the blood they have, they have none to spare There is a neurasthenia at the bottom of these attacks The patients are generally nervous and depressed, from circumstances connected with their physical and social condition Dr Penrose, at his lectures at the University, taught bleed—bleed, every case that was bled sufficiently got well, every case that was not bled, died Dr Carson's lecture followed immediately after that of Dr Penrose, and he was as bitterly opposed to bleeding as Dr P was enthusiastic in its advocacy He has been afraid of pilocarpine, because its action, once established, can not be controlled He thinks, however, the effusions observed have been caused by the convulsions, and not by the remedy Morphia, used hypodermatically, is the remedy upon which he puts dependence, it will control the convulsions Any medicine administered by the mouth or rectum, must be of slow and uncertain action, because of the slowness of absorption from the alimentary tract

DR BEATES reported a case of DIPHTHERITIC PARALYSIS in a child of eight months The muscles of the neck were affected, and resulted in extreme flexibility of the neck,—the head rolling all about Death resulted apparently from paralysis of the phrenic nerve

W H H GITHENS,
Secretary

CHICAGO MEDICAL SOCIETY

The Chicago Medical Society held a well-attended meeting on the evening of the 5th inst, and listened to the reading of an able paper by Dr A Reeves Jackson, on the question, "Is Extirpation of the Cancerous Uterus a Justifiable Operation?" The paper is essentially the same as presented by the author to the recent meeting of the American Gynecological Society, and of which the following brief abstract has been furnished us

In medical and surgical practice, the results obtained from any means or method of treatment are proper tests by which their value may be judged And, in accordance with this principle, whenever any therapeutic agent has been found, after adequate trial, to generally fail in effecting the purpose of its use, or to be habitually dangerous to health or life, candid and honest men have ceased to employ it

During the past few years, there has been a rapidly growing tendency to a bold, fearless—may I not say reckless?—progressiveness in the surgical branches of our profession, that would have appalled our predecessors When we consider that some of these achievements are scarcely more than ante-mortem examinations, whose chief usefulness consists in demonstrating how long their owners are able to survive the loss of certain bodily organs, we may properly ask whether there is to be any limit to these exhibitions of surgical temerity

I propose to discuss this question In view of known facts, is it justifiable to extirpate the uterus for carcinomatous disease?

It is notorious that, in almost all instances in which surgical operations have been done for the removal of cancers, they have only been of temporary benefit, if beneficial at all Nevertheless, so long as these procedures were comparatively free from danger to life, so long as they did no actual harm, they were doubtless proper in many cases, because they added for a time to the patient's comfort They rarely did more than this But when the operations themselves become so dangerous as to destroy 70 per cent of lives within a few hours, or a few days, and when, of the few who escape the operation, 50 to 75 per cent die from recurrence of the disease within a few months and when, further, of those who yet remain all, or nearly all, die as soon as though no operation had been performed, we should halt to consider whether our calling, thus exercised, is beneficial or injurious

The removal of the whole uterus is not a very novel operation Andreas A Cruce removed the organ, per vaginam, for scirrhus, in 1560, and similar operations were done by Wrisburg, and by Monteggia, at the end of the eighteenth century Blundell operated in three cases in 1828, two of the patients dying, and one surviving a year, and finally dying from a recurrence of the disease

In 1878, Prof W A Freund reported a new method, under antiseptic precautions, whereby the uterus could be, as he thought, more safely removed than hitherto In the early part of 1879, he had operated in ten cases, with the result of five deaths and five recoveries, and in September of that year, at the International Medical Congress, at Amsterdam, he reported four additional cases of his own In one of these, the operation was unfinished, the other three were all fatal Paggia (*Giornale Internazionale delle Scienze Med*, fas 3, 4, 1883) furnishes the latest table of operations by Freund's method It includes 91 cases, 66 died, 25 recovered, mortality, 72.5 per cent Yet, at the London Congress, Freund made the astounding statement, that the operation may be undertaken as a not very dangerous one in the early stages of carcinoma and sarcoma, in which it gives promise of a radical cure!

In consequence of the frightful mortality following the abdominal method, Czerny, Schröder Martin, and others, have practiced the removal of the uterus by the vagina, and thus far with better results A table compiled by Sanger (*Archiv für Gynäkologie*, Berlin, 1883) includes 143 cases, of whom 72 per cent recovered, and 28 per cent died

Extirpation of the uterus for cancer does not save, but destroys life In order to show how much life has been sacrificed by it, I accept all the known fatal operations as the full number, although it is certain that there have been many more They amount to 157 cases—97 by the abdominal, and 60 by the vaginal method If we grant that in all these cases the disease affected the cervix, and that the average length

of life would be seventeen months, the calculation would show more than 222 years of life—over two centuries—sacrificed by the operation. If we consider that in many of the cases the disease affected the corpus uteri, as it surely did, in which the average duration of life is two and a half years, the aggregate amount of life destroyed would be even greater.

To summarize, I have endeavored to show that—

1 Diagnosis of uterine cancer cannot be made sufficiently early to ensure its complete removal by extirpation of the uterus.

2 When the diagnosis can be established, there is no reasonable hope for a radical cure, and other methods of treatment, far less dangerous than excision of the entire organ, are equally effectual in ameliorating suffering, retarding the progress of the disease, and prolonging life.

3 Extirpation of the cancerous uterus is a highly dangerous operation, and neither lessens suffering—except in those whom it kills—nor gives reasonable promise of permanent cure in those who recover. Hence, it fails in all the essentials of a beneficial operative procedure, and should not be adopted in modern surgery.

After the reading of the paper, Dr E. Andrews inquired if tumors of a cancerous nature occurring on the cervix were not usually of a malignant kind, instead of the milder variety, like epithelioma? And he further stated that Billroth claims that 33 per cent are successful of removal of epithelial cancer from the lips and rectum. Dr Jackson answered that the "schirrus" was the variety alluded to in the paper.

Dr W. E. Clarke stated that in all the operations upon the cervix that he had performed for carcinoma, all had died within a year. In 1860 he removed the breast of a lady, and she apparently recovered—i. e., she remained well for a period of nineteen years, but she died of cancer about three years ago. In all together, sixteen cases of amputation of the breast had been under his observation, and all died from a return of the disease.

Dr R. H. Engert reported a case, of a cancerous growth on the anterior lip of the womb, that she had removed a few years since, and up to this time there was no recurrence of it.

Dr E. C. Dudley agreed with the essayist in his paper, but thought cancer might and ought to be removed when situated in other parts of the body, and recited a case of a cancerous tumor of the pelvis that he operated upon four years ago. The patient he saw but a day or two since, and she has no sign of a recurrence of the disease. The growth was proven to be cancerous from examinations of portions of it with the microscope. Some tumors occupy the middle ground bordering on the malignant, and yet they are benign. Another case he cited, where he operated three years ago. The tumor had ruptured five different times in the peritoneal cavity, bringing on peritonitis each time. In the operation antiseptic precautions were used, and he applied between thirty and forty ligatures to bleeding vessels. This was an ovarian cyst, containing a great deal of solid tissue,

and was what might be called an endogenous cancer. Up to this time the patient is in perfect health, and it seems to be a permanent cure. But if the neighboring glands are involved as in the breast, axilla and under the clavicle, then it is a serious question about operating with a hope of cure. And the uterus certainly offers a very unpromising field for extirpation as the fallopian tubes are a part of the uterus, and these are not removed in operating, and yet they are involved. He thought, however, if we diagnosed a case to be sarcoma of the uterus, that we could not say positively "No" to performing an operation.

Dr G. C. Paoli had seen many operations for removal of cancer from the uterus. Some were in his native country. A few died on the operating table. One he remembered lived but six hours, some a few days, and one case survived the operation and lived six weeks. Regarding cancer of the breast he thought when removed in a few instances they proved to be fibrous, he saw two cases of this variety where the operator acknowledged them to be fibrous tumors and they both recovered, but he knew in true cancer, either of the breast or uterus, it is sure to return in time.

Dr R. H. Engert thought if a cancer of the breast was decided to be cirrhosis, she would advise it to be removed before the adjacent glands became involved.

Dr A. H. Taggart spoke of a case operated on for removal of a cancerous breast twelve years ago and the patient was well and a resident of this city now.

Dr D. T. Nelson hardly coincided with the sweeping statement of the writer of the paper, as he thought there is a border line between the severely malignant epithelioma and sarcoma. He would operate upon a sarcoma and thought it would possibly not return. In carcinoma he thought there was little hope of its not returning. He thinks it begins as a local disease at first, and if we could diagnose the case early we then might operate and the case sometimes be cured, at least he thought this might prove true of sarcoma. Spencer Wells, up to 1881, had never operated upon a carcinomatous uterus.

Wyna Williams states that we should remove as much of the cancerous cervix and fundus as we can, and then treat the wound with bromine and some recoveries resulted. The vaginal method is the safest and offers greater permanency of cure, but the broad ligaments are left and usually they too are affected. However, if we can diagnose the disease early I believe we are justified in removing it. He cited a case of the removal of the breast ten years ago, and the patient is yet living. Another case he knew of, a soldier, whose axillary glands were all involved. The surgeon who operated could not remove all the diseased glands for fear of opening the axillary artery. Hospital gangrene set in and the diseased tissues sloughed off, and the man recovered, so far that he was assigned to the invalid corps for two years and there performed duty.

Dr Jackson closed the discussion by saying he feared from some of the remarks that had been made that he had failed to make himself properly under-

stood He believed in the local origin of cancer, and believed in its removal, if removal be possible He objected, however, to operations which destroy more than 50 per cent of lives, and which experience has shown do not remove the disease in the cases of those who recover

In operations for cancer, the object is not to remove a mammary gland, a pylorus, or a uterus, it is to remove a *disease*! And if this be not done the operation is a failure—it has not done what it aimed to do And it is none the less a failure because the patient may survive without the ablated organ for a few weeks or a few months He had only discussed the question as to the advisability of extirpation of the entire uterus for cancerous disease, an operation shown to be much more dangerous than the disease itself He approved of the minor and safer methods—the curette, cautery, caustics, vaginal, or supra-vaginal amputation, etc., because they were capable of doing all that could be usefully done by total excision with comparatively little danger to life In conclusion he would mention a fact that was rather humiliating to us as surgeons, namely, that the greatest success in the removal of the uterus had been obtained by midwives There were on record no less than six cases in which that organ had been forcibly dragged from the pelvis, with but a single death

Dr J Elliot Colburn then read a paper on the "Treatment of Trichiasis by Electrolysis," of which the following somewhat lengthy abstract is taken, as we believe the method of treatment described has not been extensively practiced by ophthalmologists

One of the common causes of diseased cornea is misplaced or misdirected cilia they may be irregular in growth, but one or two hairs sweeping the cornea, or the whole tarsal body may be covered by a dark and strong or pale and stunted growth of lashes, causing great irritation of the cornea, or loss of epithelial substance followed by ulceration, inveterate pannus or ulcers causing prolapsus of the iris, anterior synechia, and atrophy of the globe This abnormal growth of the cilia may be spontaneous or caused by chronic inflammation of the conjunctiva of the margin of the lids, as in *tinæ tarsi* or traumatism, as burns, wounds of the eye, etc Trichiasis or distichiasis may be followed by or complicated with entropion in trachoma The irregular growth of lashes will cause great irritation producing excessive lachrymation and photophobia, or sensation of foreign body in the eye The diagnosis of distichiasis is easy, but in trichiasis the lashes may be so pale and minute as to escape detection For this reason it is well in all superficial diseases of the cornea to examine the border of the lids with a three-inch lens and a strong light The treatment of trichiasis consists in the permanent removal of the displaced lashes, and the treatment of such complications as may occur The methods of treatment described in our text books are quite formidable and not altogether satisfactory, as they result in more or less deformity of the lid and destruction of tissues The method which we have used in more than fifty cases, twenty-two of which I have been able to observe through periods of from six months to three and a half years, is the use

of "electrolysis," as applied in the removal of hirsuties of the face The instruments necessary are (as described by Drs Fox, Hays and others) first, a galvanic battery of six or more cells Second, a light needle-holder armed with a suitable needle This is a very important instrument The one I have found the most convenient is made by drawing the temper of a jeweler's brooch No 6 and repointing on an emery stone The patient being placed in a strong light, the surgeon fixes the lid in a Desmarest's or Knapp's clamp The patient holds the handle of a positive electrode in the right hand and places the moist sponge on the palm of the left After the needle is introduced into the hair gland and allowed to remain for about ten seconds it may be withdrawn the patient should remove the sponge from the left hand simultaneous to the withdrawal of the needle The number of cells to be used should be decided by the surgeon's knowledge of the condition of his battery I used from six to ten cells of zinc-carbon battery When the hairs are very fine and obscure, the use of a three-inch lens will be found quite serviceable After electrolysis, the cilia should be removed with epilation forceps The only objection to the operation in my experience is that when there is a large number of cilia to be removed, the pain becomes somewhat tedious, though with a clamp I find the pain is not so great, and is only about fifteen per cent as much The irritation following the operation is slight, the lids will be swollen for a day or two In one case, however, from which I removed but two or three hairs, the operation was followed by the growth of fifteen or twenty minute cilia which were promptly removed I have noticed that chelazion and other cystic tumors of the lids would be very rapidly absorbed when treated from fifteen to twenty seconds with the same needle My record shows more than fifty cases, and in all, so far as I know, the results were good In twenty two cases which have been under observation for more than six months since the last operation, there has been no return of the lashes removed We have used this procedure at the State Eye and Ear Infirmary and at the Central Free Dispensary in simple trichiasis, entropium previously operated on and but partially successful, leaving a few misdirected hairs sweeping the cornea, also in cases of entropium which are unfit for operation In too dense growth of cilia, that sometimes occur in scrofulous children, and interfering with sight—all diseases which interfere with the refracting media of the eye are of great moment to patient and physician, and among the most important are those affecting the transparency of the cornea and the regularity of its surface

L H V

DOMESTIC CORRESPONDENCE

Boston, Mass., Oct 30, 1883

DEAR DR DAVIS

As you permit me, I send herewith for your journal—as I presume it is more *uniformly*, and per chance more *widely* spread than any medical journal

in the country—the document issued by the Central Committee of the League of the Italian Societies for Cremation. It is true that my translation of the original document has been, by mistake and without my knowledge, published in the *Boston Med and Surg Journal*. The editor, moreover, indulges his wit upon the whole matter as if cremation were a “pet scheme” of somebody, but as I have no such scheme in view and only a few suggestions to make, and as the Italian committee are honorable men and wish the paper to be *widely* circulated, I hope you will not decline its further publication. I shall use the translation as suggestive of matters connected with the great subject of public sanitary thought and work, viz, the question of the safe burial or cremation of bodies so that no evil may result to the living.

So far as I know, the questions connected with the relative sanitary values of interment and of cremation have never been scientifically settled. I doubt whether it would be possible for one man, or even one body of men, to satisfactorily determine these questions. I respectfully invite the attention of the whole profession, and especially the State Boards of Health, to the circular issued by the Italian League. Whether an individual approve of that document or not, or even if he have already settled the question as to his own action in the matter I would ask him to consider the following proposition.

It is true that intramural burials have been forbidden in some few cities, but that has been done, I think, rather because of the odor than of any *positive* proof of *evil* results to the living.

Cremation claims to destroy all germs and burn up everything noxious. One furnace claims to do so very completely. But the question of the sanitary value of the two methods is worthy of being still more thoroughly and carefully investigated.

Dr J F A Adams, of Pittsfield, in his admirable paper on Cremation and Burial (sixth annual report of Massachusetts State Board of Health, 1875) used the following language: “Further investigation we earnestly hope will be generally undertaken.”

With great deference to the opinions and peculiar circumstances of the various boards of health in this country, I would venture to suggest to each the following plans or others similar to them.

1st. An individual, acquainted with sanitary matters and interested in the study of minute but important questions thereupon, should be employed to superintend the whole investigation.

This would divide itself into two parts, viz the real influence on health of the burial and of cremation.

(a) The influence of grave-yards upon the health of individuals living or working in or near them.

(b) The water in or near grave yards and the soil over and around graves of old or recent date.

Throughout the country there must be many grave-yards appropriate for such investigation.

(c) The air arising from such grave-yards should be tested chemically, microscopically and perhaps by experimentation on animals.

Cremation—Of this method of disposing of the

dead and of its influence on animal life we have a different field. If it be true that some furnaces have been constructed so that all impurities of the air which had been contaminated by the burning of a body are destroyed, it would seem that cremation would be more proper than burials. This point should be more thoroughly tested, as above suggested, by all the appliances of modern science.

If it be true that intensely poisonous alkaloïds coming from decomposing bodies, which, in combination with other matters, may become of a “frightfully poisonous character,” it surely seems entirely appropriate for sanitarians to investigate the question of cremation as a preventive of that danger.

If grave-yards are *foci* of pestilential disease, as one of your correspondents recently has stated is the fact in one of our Southern States, the question of cremation instead of burial should be most widely mooted.

But where now can we look for a really scientific and well elaborated proof of the relative value of the two methods as sanitary measures for the future of our people?

In connection with this subject I would advise the perusal of the pamphlet entitled “Cremation.” An argument to prove that cremation is preferable to interment of dead bodies, by Julius Le Moine, Pittsburg Pa., 1881.

I cannot better finish these brief suggestions than by asking the same questions put by the writer of an excellent article entitled “On Cremation in the 19th Century.”

1st. Is ordinary burial ever dangerous?

2d. Does cremation remove the danger?

Yours, very truly,

HENRY I. BOWDITCH

The document received from Italy is as follows.

SIR I beg you to give the greatest publicity in your journals to the following note. G. PINI

THE CREMATION OF THE REMAINS OF GENERAL GARIBALDI

The Presidency of the Central Committee of the League of the Italian Societies for Cremation, has addressed the following notice to the Garibaldi family and to the President of the Council of Ministers (of Italy).

It is not very long ago since the whole of Italy was profoundly afflicted while deploring the loss of the great citizen, whose actions were a memorable example of the deepest devotion to country, to liberty and to truth.

Notwithstanding this grief, there was universal applause at the news that the hero, by an act of his last will, had ordered that his remains should be burned as soon as possible after his death. Every one understood that this great act, inspired by the highest sentiments of our time, would exercise the greatest moral influence upon our people. Unfortunately, these manifestations of moral elevation were quickly followed by a deep regret, not that

family of the hero refused to carry out the solemn testamentary disposition of his own remains

We will not discuss, nor will we even seek to know the feelings that had induced the relatives of the deceased thus to resist his last wish. We would simply remark, that if the laws of every civilized country provide that a due respect should be paid to every will which is well conceived and expressed, this duty becomes more imperative when the testator is a person worthy of the highest veneration as well for his great actions as for his noble aspirations.

It ought to be said that Garibaldi, by the will in question, meant to strengthen in the minds of our people a great philosophical principle, violently opposed as it may be by the enemies of all civil progress, viz., that fire is the surest purifier of the remains of those we mourn, inasmuch as it gives to the elements which compose it the primitive conditions of all future organism. This principle, which was revealed to a few ancient philosophers by a happy intuition, is plainly demonstrated at the present time by strong arguments resting upon facts, physical, chemical, and biological, of modern science.

The vote passed at the last Congress, at Modena, by the delegates from the Italian Societies for Cremation, is wise and praiseworthy in all its bearings. By this vote the Congress has expressed the desire that "on the occasion of the first anniversary of the death of the great captain his body should be burned at Caprera." At the same time the Congress requested all Societies for Cremation to agitate this question in their respective localities, so that all citizens may be led to ask of the government and of the family of Garibaldi exact fulfillment of the will of the General.

The Committee of the Italian League of the Societies for Cremation, therefore, to-day feels it an imperative duty to appeal in the most urgent and solemn manner to sentiments of humanity of the family of Garibaldi and the wisdom of the government for the fulfillment of the last will and testament of the General, and also of the wishes expressed by the first Congress of the Italian Societies for Cremation.

In acting thus, Italy will have accomplished a truly sacred and memorable act, while it is also in harmony with the fundamental principles of right, of morality, and of science.

Prof G CANTONI, Senator

Dr G PINI, Secretary

PHILADELPHIA LETTER

THE CHICAGO BEEF WIRE SKEWER, AND THE DISCUSSION UPON IT IN THE JOURNALS AND PAPERS
PHILADELPHIA, Nov 9, 1883

The health of our city continues very good, although there is, from certain indications, more diphtheria on hand than is pleasant. Owing to the mildness, however, of many cases, the results are unusually favorable, hence the Board of Health is able to state that the disease is not epidemic.

¹ *Architect and Building News* Sept 29 1883

Dr W Porter of St Louis *Net England Medical Journal* Sept 15 1883

An attempt to raise a breeze on the subject of foreign bodies in the air-passages was lately inaugurated here, and as the original subject (that of food) bears upon, to some extent, the fame of Chicago, we subjoin an abstract of the paper attack which was read before the Philadelphia County Medical Society a short time ago, by Dr W R D Blackwood, Neurologist and Electrician to the Presbyterian Hospital, and Physician to St Mary's Hospital, of this city.

The supply of good, wholesome meat to a large city, is a problem involving many points of great importance. Many cattle are slaughtered within a few hours after reaching the abattoirs, before the feverishness and excitement resulting from a long railroad journey have abated, and the meat, under the circumstances, is not nearly so good or suitable for food as it would be even in healthy and prime animals, were it killed after a due time of rest. For a short time past, beef slaughtered in Chicago, and brought here in refrigerator cars, has attracted the attention of those able to judge the article according to its merits, and for quality it is pronounced fully equal to any heretofore put on the market, and far ahead of the great bulk previously sold in the city, so far as a wholesome, sound, and moderate-priced beef is concerned. The animals are selected from approved droves, and well fed, watered, and housed for a definite and proper time before killing, and the product, therefore, is not only in its appearance perfect, but in the vital point of fitness for wholesome, nutritious, and palatable food it is unrivaled.

Some weeks ago a sensational attack was made on this variety of beef, in the interest of a clique of butchers in this city, who, knowing the value of the Chicago article, were afraid of the effect on their business when it became better known to the public, and the silliest pretext, among others, advanced, was a supposed danger to consumers from the novel skewers employed to fasten the labels on the hind and fore quarters, these being of barbed wire, such as I exhibit to you to night. It was predicted that an epidemic of harpooned tongues, tonsils, and pharynges would ensue from swallowing unawares by consumers the numerous wire skewers concealed in the meat, and I am informed that, for a time, a serious falling off in sales actually resulted from fear on this point. You will readily see, that any one who would try to gulp down a morsel of meat large enough to hide this fastener, must at the same time be in a famishing condition, have the appetite of a tiger, and need lessons in table etiquette, to put it mildly.

The labels which are attached—one to each quarter only—are removed by the butcher before cutting up the meat, and could not, even if allowed to remain, fail to attract attention of both cook and eater. Mr Bradley, of the Great Western Market, is a large dealer in this city of this excellent beef, and he has kindly supplied me with samples of the barbs. The claims which he makes for the particular beef under consideration are worthy of notice, as his experience in business for some years past is unequaled in this city, and the enormous quantity which he distributes to a large section of surrounding country fully justifies the high value he places upon it. I am glad to

confirm what he says, from personal experience in my family. The meat is simply delicious, and excels anything we have previously had from the best butchers of the city.

An attempt to revive distrust of this meat was made in a letter to the *Medical Times* from a recent graduate who asserted that the hundreds of pieces into which the carcass was divided were armed with the deadly skewers by the *retail* dealers, through tacking on their private cards, etc., but to "hedge" (as the gambling fraternity puts it), he consoled the public, who ran such frightful risks, with the assurance that his efforts with *one* certain firm had made the barbs "a thing of the past."

The author of the paper which had originated this outburst, however, is a practical, straightforward gentleman, neither aggressive nor retiring in matters of public interest, and to definitely settle the business, he has shown, in a pointed and caustic reply in the journal alluded to, that—

First His paper originally appeared many weeks *after* the alleged swallowing of the barbs, and *after* the attack on Chicago beef made through the mediumship of a daily newspaper, and that *several* firms wholesaled the beef here, the person he warned having three large establishments, and that his information concerning the "clique" came directly from the irate butchers.

Second That as only *four* skewers were sent with each entire steer from your city, the multiplication theory was visionary, even if the barbs were not removed before cutting up the carcass, as is actually done by the wholesale dealers.

Third That the enterprising Chicago people cared nothing about the slow going Quaker City notions, and that as the skewers perfectly fulfilled their errand, notwithstanding the pronouncement of the young laryngologist and his one firm, the terrible barbs were *still in use* by all wholesale dealers here, samples with tags attached being sent to the editor from several of the dealers, which were taken from the quarters the morning his reply was written, and that, therefore, the security thrown around the community by the newspaper expose was merely fanciful, a sad result of "a tempest in a teapot."

A final consolation was added, to the effect that if the skewers *could* be swallowed (which no sensible man believes), then a new and unhopd for specialty in medicine had been discovered—that of *EXPERT in the extraction of Chicago beef barbed wire skewers*. An additional tribute was paid to the excellence of the beef, which has rapidly gained in the estimation of not only epicures, but the great mass of hungry householders, especially those of the working class, who know a good thing not only when they see it, but when it is good to eat.

TREATMENT OF TYPHOID FEVER

HARMONY GROVE, GA. Nov. 8 1883

N. S. DAVIS, M.D.,

Dear Doctor—I notice an article in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION on the treatment of typhoid fever, which was very interest-

ing to me, as I had been making some investigations on the same line of treatment. I have been using an iodide mixture with iron and acid mixture, which I find to be the most successful of any treatment I have ever used. I find patients under this get well quicker and suffer less from dryness of the mucous membranes.

I believe this is the most rational treatment that ever has been used in the early part of the disease, as it acts on the glandular system and thereby prevents, as I believe, often the breaking down of the glands and the formation of the ulcers and other troubles accompanying them. I am in the habit of using the following prescription:

R Potassii iodidi	ʒi
Tinct iodine	ʒi
Glycerine	ʒiv
Aquæ	ʒiv
M Sig Teaspoonful three times a day after meal	
R Tinct iron	ʒss
Dil phosph acid	ʒss
M Sig Twenty drops before meal, or	
R Hydrochlor acid	ʒi
Liq pot arsenic	ʒss
Aquæ	ʒiv
M Sig Teaspoonful before meal	

A report of several cases has been made by me with this treatment in the Transactions of the Georgia Medical Association. My reason for the acid treatment with the iodide is to prevent the destructive metamorphosis of the tissue of the body and thereby prevent the loss of fat. I notice Dr. Smith recommends acid with his treatment.

Respectfully,
L. G. HARDMAN

IS CONSUMPTION AN INFECTIOUS DISEASE?

Early impressions and our personal surroundings have something to do with the formation of our opinions.

When a youth, my father, a clergyman, in one of his parochial visits took me into a small house where two sisters lay dying of consumption. When we left, my father said to me that probably the younger sister had taken the disease by sleeping with the older one.

My own mother developed the same dreadful disease, from which time her life was one of self-abnegation. She did not allow her children to take her breath, to cough, she invariably took herself to her room. So particular was she in the destruction of her sputa, that I never but once saw it, and that was when called to her bedside when she was supposed to be dying. I saw a splash of blood and pus that had fallen to the floor. She never kissed her children on the mouth after the disease developed. But I will not particularize further. She believed that the disease could be communicated.

These incidents show the traditions, and probably teaching, of the medical attendant fifty years ago. At that time in New England, consumption took off one of a family, it was commonly remarked, and such people the

generally lived in small houses, sleeping apartments were necessarily small and crowded. This proves nothing, of course, as we have no statistics of heredity at hand, but it accounts for impressions.

Within a few years I have seen the children of two families die out, four in each house, and in one a fifth, a son, is now tuberculous. I have wished they had better houses and more sleeping rooms, both are small frame structures, with an annex called a lean-to. This form of house crowds the children into a small attic for sleeping rooms. In one family both parents are living, with no discoverable taint. In the other the mother is well, the father has been long dead, I do not know of what. I could give several other instances of what seems to be similar effects from crowded sleeping.

The doctrine of infection is an old one, and it may not be amiss to very briefly recall opinions that doubtless have been familiar, but may be partly forgotten.

Sixty years ago "Thomas' Practice" (of England), edited by Prof. Hosack, of the University of New York, says "Although phthisis is not at present regarded by us as infectious, yet Morgagni Von Swieten and Morton do so regard it, and all over Southern Europe and Asia Minor it is so regarded. In the Venetian states the law directs the clothing and even furniture of those who have died of consumption to be burnt. In Sicily consumptives were commonly deserted as though plague-stricken, bed and bed clothes were burnt, and apartments carefully disinfected."

"If the disease is communicable, it is by sleeping with the patient and inhaling the breath." He closes by advising to avoid close intimacy with consumptives.

The famous Gregory, who was contemporaneous with Thomas, cites the same authority and says "It is a good maxim to err on the safe side. Precaution founded on the above facts would lead us to avoid sleeping with the sick as much for the purpose of avoiding the pernicious effect of bad air as from the danger of contracting consumption."

Dr. Rush relates the history of a contagious form of the disease which spread over a plantation (*Med Mag* vol 1).

The Encyclopædia of Prac Med, says the subject is one that scarcely admits of being confirmed or confuted, giving similar advice in regard to hygienic measures.

Watson denies the contagiousness of consumption, but would not allow anyone to sleep with, or even in the same apartment, with the sick of the disease.

Williams on Consumption says "I do not think it contagious like small-pox, scarlatina, etc., but both reason and experience teach that a noxious influence may pass from a patient in advanced consumption to a healthy person in close communication and may produce the same disease, and therefore always recommend such patients to sleep alone."

Bennet on Pulmonary Consumption expresses similar views.

Flint does not mention contagion, but the facts he gives of the spread of the disease in households are appalling.

Smith on Children says "Recent discoveries afford ground for the opinion which some of our best authorities in pathology hold, as Waldenburg, etc., that minute particles exhaled or expectorated from the lungs may be the medium of infection."

Ruchle, after quoting the accurate and justly celebrated Morgagni, says (Vol V, *Ziemessen*, p 497), even at the present day it is commonly supposed that the disease may be communicated by the intimate relations existing between husband and wife, whether this can be fully proved we agree with Laennec and Andral that caution and cleanliness should be observed in the care of consumption.

Bartholow, *Prac Med*, p 357, says "The frequent examples of apparent communication of the disease between husband and wife where a hereditary tendency had been proved to exist, have awakened strong suspicions of the possibility of communication."

Last year the medical department of the German ministry of war issued a circular, urging upon the medical officer with the army to give the utmost attention to beginning tuberculosis among recruits, and as far as possible, not to enroll suspected individuals at all, or if enrolled to dismiss them from the service in the earliest stages of the disease. Hospital patients suffering from unquestionable tuberculous affections are to be isolated, and their sputa disinfected.

"In relation to this question, the microscopic examination of the sputa lately has become of the greatest importance. Therefore, first-rate microscopes recently were distributed among all the larger garrison hospitals in order to facilitate an early diagnosis."

Prof. Fraentzel (also an active army surgeon) congratulates the medical authorities of the War Department on this step, which, he thinks, will be so great a benefit to the army. He unhesitatingly adopts the germ theory of tuberculosis, and applies its logical deductions to clinical practice. Continued researches now comprising upwards of 500 cases served to confirm his former views about the diagnostic and prognostic value of the tubercle-bacilli found in the sputum (*Med News*, Aug 25, 1883).

Such is the general tenor of the tradition and the past two hundred years by which it will be seen that whatever theory of contagion may have been held, practically the advice has been, separation of the sick from the well in sleeping, and great care as to cleanliness, all of which does not prove tubercle to be infectious, but to this adding the vast number of successful inoculations of tubercle by Villemin, and many others for a period of nearly twenty years, we are prepared to believe that Koch may have discovered the fatal germ.

At the late meeting of the Wisconsin State Medical Society, I had the honor to introduce the resolution to which your correspondent of October 13 refers, and which, I learn, has been sharply criticised by Mr. Shrady, of the *Record*. It will be noticed that the resolution scarcely more than reaffirms the advice of the text-books. I do not defend the precise phraseology of the resolution, but its intention need not be misunderstood. After the discussion of

Dr Senn's very able paper the resolution was adopted without a dissenting voice. The resolution advised the separation of the sick from the well, not only in our homes, but in public institutions. The latter were included from my having just been called to examine a man far gone with consumption in the State Prison. He was in a chilly corridor (the hospital was undergoing repairs), surrounded by well men, and it occurred to me that some of those men, who had no voice as to their associates, might go out with germs of the disease ready to be developed, a thing the law did not contemplate as a part of their punishment.

Cruel as the suggestion seems to the kind hearted Dr Stair, I doubt if there is a parent who would not if instructed that there was possible danger, separate the sickly child from its fellows, and give it a cot in or near their own room. For I believe that in this as in other zymotic diseases, other things equal, youth are much more susceptible to infection than adults. The precautions proposed are simple, but I believe important.

I do not share your correspondent's fear that we as a society may suffer a serious humiliation when the theory of infection shall be disproved. When the multitude of pathologists abandon their microscopes and retreat we shall find ourselves in good company, and will console ourselves with the reflection that we have erred on the side of safety and humanity.

Mr Shrady, of the *Record*, might possibly have chosen more courteous words when criticising the action of our State Society. Perhaps he has lectured the Medical Department of the German War Ministry for their precautions. I saw "perhaps." I do not know. Two years since I thought the course pursued by the *Record* in relation to the Code unprofessional, and I ceased to subscribe for it, hence my ignorance.

MARRESAN, WIS

GEO MANLY, MD

FOREIGN CORRESPONDENCE

PARIS, October 26, 1883

M Camille Dareste, a distinguished teratologist, lately made a very interesting communication at the Academy of Sciences on the Production of Monstrosities in Man and in Animals.

He traces the origin of all congenital deformities to the embryonic state, and explains their mechanism by the arrest of development caused by the pressure of the amnios on the embryo, which produces results according to the age of the latter and the manner in which the pressure is effected. The arrests of development that may be attributed to this cause are, hemimelia, phocomelia, syndactylia, congenital deviations, congenital dislocations of the femur, essential paralysis of infancy. M Dareste considers that all the anomalies of the limbs with the exception of polydactylia, however different in their aspect, are the result of three factors—arrest of development, deviation and soldering or adhesions, which are sometimes produced separately and sometimes together, which, in their turn, may be attributed

to one sole cause, viz the pressure of the limbs against the amnios arrested in its own development. From these conclusions it would seem almost superfluous to endeavor to combat the theories which ascribe certain anomalies of the limbs to pathological causes, and particularly to diseases of the nervous system, and yet by a singular anomaly he admits their possibility, giving as his reason that these theories are too generally admitted to be set aside altogether. Clubfoot may be produced after birth by pathological causes, such as convulsions or paralysis, but M Dareste contests that it could be produced by the same causes before birth. In fact, it was long suspected that these congenital deformities were caused by pressure during embryonic life, but the agent or mechanism of the pressure was not so well understood. After producing artificial monstrosities, M Dareste arrived at the following conclusions:

1 That the amnios, arrested in its development, compresses those parts of the embryo on which it is applied.

2 That the pressure is exerted when the body of the embryo is as yet only constituted by homogeneous cells.

3 That this pressure when exerted on the limbs determines three sorts of effects, sometimes separately and sometimes together,—arrests of development, deviations and solderings or adhesions.

For the fourth time within the last few weeks the meetings of the Paris Academy of Medicine have been taken up with a discussion on tubercular phthisis. After M Cornil, followed M M Bouchardat, Béchamp and Daremberg, and each had a theory of his own. All are agreed as to the contagious or parasitic nature of the disease, but they differ as regards the signification of the presence of the bacilli of tuberculosis discovered by Professor Koch, of Berlin, that is how the micro organisms got there, whether they were generated in the body or whether they were introduced from without, or, in other words, whether the microbes of tuberculosis were the cause or consequence of the malady. M Cornil confines his researches to the constitution of the tubercle and to the state of the tissues surrounding it, and he is aware that tuberculosis may be produced in a healthy subject by the inoculation of these bacilli.

M Bouchardat protests against the theory of the production of tuberculosis by the introduction of a germ from without, and if it does enter the body, it does so very exceptionally. The eminent Professor of Hygiene describes the tubercle as commencing under the influence of a disturbance of the functions of the respiratory and circulatory systems, and which, in its turn, is produced by that condition known as physiological misery. Following in the track of M Cornil's histological researches, M Bouchardat explains the formation of tubercle by the stasis of the blood in the capillaries, and concludes with the remark that if the inoculation of tuberculous matter is effective in producing phthisis, and if the latter becomes contagious, these conditions may be looked upon as accidents, which do not affect the general cause, to wit, the physiological misery referred to above, by which the malady is engendered.

M Bechamp expressed himself to the same effect. He said that the morbid cause existed in the organism, and that under the influence of this cause, the microzymata which constituted the deep layer of the pulmonary tissue are altered, and, by a series of modifications, become the generating foci of tubercles. These, in their turn, developing, unite to form cavities, or, in other words, it is the complete disorganization of the organ of respiration.

M Daremberg contests M Bouchardat's deductions drawn from M Cornil's histological researches. For him, the bacilli are the direct and necessary factors of tubercle, and inoculation, moreover, demonstrates that they are also the generators of the disease, and that, consequently, the germ is introduced from without. But at the same time, M Daremberg admits that for its development, it is necessary for the germ to have a favorable soil, without which, the bacillus of tuberculosis remains sterile. The morbid agent may be said to be in the body and out of the body, the patient manufactures his disease, but he does not do so alone, he must have the microbe. In other words, there can be no phthisis without the microbe, but there may be a predisposition only to the disease, and the practical conclusion arrived at is, that in our treatment of the disease, we should not confine ourselves to hunting after the microbe, but the general health of the patient must be improved by every possible means.

But, it may be asked, if it be sufficient to render the soil unfit for the development of the microbe, and if the extermination of the parasite is impossible, where would be the use of directing our attention to the microbe, which is unassailable if we do not direct our efforts to the amelioration of the general condition? In fine, for the clinician, the microbe may be considered as non-existent.

Dr Depaul, Professor of Obstetrics and Physician to the Lying-in Hospital in Paris, died on the 22nd inst, at Morlaas, near Pau, his native place, where he had gone to recruit his health during the summer holidays. He was preparing to return to Paris, when he had an attack of pneumonia, which carried him off in three days, in the 73d year of his age. He began his medical studies in 1831, became a pupil of Paul Dubois, and took his degree in 1838. In 1841 he was appointed chef de clinique to the celebrated obstetrician whom he succeeded in 1862 to the professorial chair of Clinical Obstetrics, which appointment he held to the day of his death. M Depaul was an able professor and a most expert accoucheur, and his systematic teachings will long be remembered by a host of his pupils who are scattered all over the world. In addition to these titles, Dr Depaul was a member of the Paris Academy of Medicine, of which he was also President. He took part in the debates of the Academy on many important subjects, the most remarkable being the utility of vaccination, the origin of the vaccine virus, vaccination of syphilis, cow-pox, etc., on which subjects he was considered a high authority, from the vast experience he acquired as head of the vaccine department. At a memorable debate at the Academy, he also condemned the theories of M Pasteur as applied to medicine, and stig-

matized them as "audacious and extra-scientific." Dr Depaul was created Chevalier of the Legion of Honor in 1855, Officer in 1868, and Commander in 1874, for his important services to science and to the State.

REVIEWS

TRANSACTIONS OF THE NEW-HAMPSHIRE MEDICAL SOCIETY

At Its Ninety Third Annual Session held at Concord June 19 and 20
1883 810 187 p p

The President's Address, by Dr N H Crosby takes for its topic "The Country Doctor," and indulges in humorous allusions to the past, drawing valuable applications at the same time from each incident. It contains also an interesting sketch of the founder of Thompsonianism in this country. Following this come articles entitled "Our Duty," by Dr G W Hatch, "The great Work," by Dr Geo C Blaisdell, "The Best Means to Prevent the Spread of Small-Pox," by Dr T J W Praz, "A Paper on Surgery," by Dr F A Stillings, embracing remarks on indolent and varicose ulcers of the leg, carbuncle and its treatment, a new splint and the dry suture. The article by Dr Irving A Watson on "Water-Pollution Wells" reproduces the analysis of the waters of the Newport well, with its history and the result of the use of its waters by the neighboring farm-house, the history of the Rye Beach well, which has attracted so much attention, is also given. The Report on Practical Medicines, by Dr Wm I Smith, who takes for his subject that of Colds. The address by Dr D W Jones before the graduating class of Dartmouth Medical College November 14, 1882, is also included in this volume. Dr D S Adams reports progress in a case of abscess of the lungs, and Dr P A Stackpole has an article on Venesection, its necessity and neglect, giving some eight cases where he had practiced venesection to advantage. A paper by Dr L G Will relating to the Practice of Quackery in the State, Reports of District Societies, of delegates to the Dartmouth Medical College and to the Maine Medical Association, a necrological record of four members, and the list of members, comprehending 210 names, close the volume.

NEW BOOKS

GERMANY

- Hasse Dr C, das Pessarum Occlusum u dessen Application Supp zu Ueber facultative Stenilität Third edition, 15 pp, Neuvidirt
Henle, Prof Dr J Grundriss der Anatomie d Menschen Braunschweig Viesog & Sohn
Lewandowski, Dr Rud, die Elektro-Technik in der praktischen Heilkunde Wien, Harteben
Mittheilungen aus der chirurgischen Klinik zu Kiel Hrsg N Prof Dr Dr Frdr Esmarch Kiel Sisins & Tischer

— Aus dem embryologischen Institute der k k Universität in Wien, Von Prof Dr S L Schenk Wien Brannmüller

Muller, Dr Frdr Wilh Grundriss der Pathologie u Therapie der venerischen Krankheiten, etc Leipzig Veit & Co

Nowak, Prof Dr Jos Lehrbuch der Hygiene Wien, Toeplitz C Deuticke

Schatz, Prof Dr, Frdr Entwürfe Hebammen-Ordnung f das Grossherzogthum Mecklenburg-Schwerin Rostock, Werthers, Verl

Stricker, Prof Dr S Vorlesungen ub allgemeine u experimentelle Pathologie Wien Braumuller

FRANCE

Debierre (C) Developpement de la vessie, de la prostate et du canal del'urethre Paris

Dujardin-Beaumetz Dictionnaire de therapeutique, de Matière Medicale, de pharmacologie, de toxicologie et des eaux Minerales 7 1 A—Chloroforme Paris (Il sera publie en 15 fasc, a 5 fr Il paraîtra 3 fasc par annee)

Eyssantier (J) Des procidences des membres dans les presentations du sommet et de la face Montpellier Bochm et pls

Felix (C E) Recherches sur l'excision des organes genitaux externes Chez l'homme Lyon Duc et Demaison

Granel (M) L'Ergot, la Rouille et la Carie des cereales Paris lib Doin

Guerin (G) Essai chimique sur la taurine et extraction d' une ptomaine sulfurée de l'urine Lyon, Waltener et Co

Marangro (A) De la résection du conde dans les cas d' ankylose et en particulier de la resection humerale du conde Lyon Delaroche et Co

Masselon (J) Memoires d'ophthalmoscopie Chorio-retinite specifique Paris, librairie Doin

Mazgner (C) Des formes diverses d'epidemics puerperales Paris, lib Doin

Ribemont-Dessaignes (A) De la delivrance par tractions et par apression Paris lib Doin

True (H) Ataxie locomotrice et lesions cardiaques, leurs relations pathogeniques Lyon

ENGLAND

Abbreviated Prescriptions for Class Reading in the Westminster College of Chemistry and Pharmacy, 32mo, pp 20, sewed, 1s, ——— & Co

Foster (B) The Political Powerlessness of the Medical Profession 8mo, pp 19, bd Churchill

Guy's Hospital Reports Volume 26, 7s, bd Churchill

Habershon (S O) The Harveian Oration, 1883 2s, Churchill

Hamsin (R) On some recent advances on the Surgery of the Urinary Organs 1s, Churchill

Lankester (E) The Cholera What is it? and How to Prevent it 6d, Routledge

Manson (P) The Filaria Sanguinis Hominis, and Certain New Forms of Parasitic Disease in India, China and Warm Countries Illustrated 10s 6d, Lewis

Martindale (W) and Westcote (W W) The Extra Pharmacopœia of Unofficial Drugs and Chemicals and Pharmaceutical Preparations 8vo, 6s, Lewis
New Departure in Medical Electricity 8vo, 2s 6d, Morton & B

Parkin (J) The Antidotal Treatment of the Epidemic Cholera Fourth edition, 5s, Bogue

Reynolds (J J) Notes on Diseases of Women Second edition, 12mo, pp 110, 2s 6d, Churchill

Spencer (J) Elementary Practical Chemistry and Laboratory Practice Part I, 12mo, pp 206, 1s 6d, Boulton

Welch (F H) Enteric Fever, as Illustrated by Army Data at Home and Abroad 8mo, 5s 6d, Lewis

UNITED STATES

Fothergill, J Milner The Physiological Factor in Diagnosis N Y W Wood & Co 8mo, 25¢ pp, cloth, \$2 25

Hudson, W H Sea-sickness Its cause, nature and prevention without medicine or change in diet A scientific and practical solution of the problem Boston S E Cassino & Co 147 pp, 16mo, cloth, \$1 25

Hun, H A Guide to American Medical Students in Europe N Y W Wood & Co 151 p, 12mo, cloth, \$1 25

Parkes, Edmund A Manual of Practical Hygiene, in two vols Vol 1, N Y W Wood & Co 8mo, 368 pp, illustrated (Wood's Library of Standard Medical Authors) Cloth, subscription, \$1 25

Ringer, Sidney Hand book of Therapeutics 10th edition N Y W Wood & Co 688 p, 8mo, cloth, \$5

Ross, Jas A Treatise on Diseases of the Nervous System Second edition N Y W Wood & Co Two vols, illustrated, 8mo, cloth, \$15

Witthaus, R A The Medical Student's Manual of Chemistry N Y W Woods & Co 8mo, cloth, \$3 50

MISCELLANEOUS

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM NOVEMBER 2, 1883, TO NOVEMBER 9, 1883

Price, Curtis E, Captain and Assistant Surgeon, assigned to duty at Fort Custer, M T (Par 1, S O 187, Department of Dakota, October 25, 1883)

Wolverton, William D, Major and Surgeon, granted leave of absence for one month (Par 6, S O 201, Department of the East, October 24, 1883)

Wilson, George F, First Lieutenant and Assistant Surgeon, assigned to temporary duty at Fort Townsend, W (Par 2, S O 1 De ment of the Columbia, October 29, 18

Owen, W O, First Lieutenant and Assistant Surgeon, relieved from duty at Vancouver Barracks, W T, and assigned to duty at Fort Stevens, Oregon (Par 2, S O 148, Department of the Columbia, October 26, 1883)

Patzki, J H, Captain and Assistant Surgeon, granted leave of absence for three months on surgeon's certificate of disability (Par 6, S, O 254, A G O, November 6, 1883)

Merrill, J C, Captain and Assistant Surgeon, granted leave of absence for one month (Par 7, S O 201, Department of the East, October 24, 1883)

Vickery, R S, Major and Surgeon, assigned to duty at Fort Townsend, W T (Par 3, S O 149, Department of the Columbia, October 29, 1883)

Sternberg, George M, Major and Surgeon, leave of absence granted October 4, 1883, extended one month (Par 4, S O 255 A G O, November 7, 1883)

Bache, Dallas, Major and Surgeon, par 1, S O 238, A G O, October 18, 1883, assigning him to duty at Willet's Point, New York, revoked (Par 2, S O 252, A G O, November 3, 1883)

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING WEEK ENDING NOVEMBER 3, 1883

The orders of Medical Inspector A C Gergas to the Naval Hospital, Mare Island, Cal, revoked, and to remain at Naval Hospital, Chelsea, Mass

Medical Inspector Somerset Robinson to the Naval Hospital, Mare Island, Cal

Surgeon F M Dearborne to appear before the Retiring Board Nov 5

Medical Director A L Gihon and Medical Inspector A Hudson to represent the Navy at the meeting of the American Public Health Association at Detroit, Mich, Nov 13

Assistant Surgeon J M Edgar, from the Receiving Ship St Louis, at League Island, Pa, to the Receiving Ship Wabash, at Boston, Mass P A Surgeon A A Austin to the Receiving Ship St Louis, at League Island, Pa

There were no changes during the week ending Nov 10

A NEW prize, to be called the Bufalini prize, is announced for international competition, having been established in fulfillment of the wishes expressed by a late Minister of Public Instruction, Italy, Signor Bufalini. The first award is to be made at the end of 1884, and competing essays are required to be sent in to the Secretary of the Medical Faculty of Florence, before October 1, of next year. The subject selected is "The Application of the Experimental Methods to Science"—*Medical Press*

NEW MEDICAL JOURNAL.—The first number of the *Edinburgh Clinical and Pathological Journal* was issued October 13. It is under the joint editorship of Dr Graham Brown (medicine), Dr Cathcart (surgery), and Dr Berry Hart (midwifery)

THE SURGICAL PANTAGRAPH—The latest use to which the graphic method has been put is to obtain an exact representation of the shape and size of a body in the depth of a cavity which can only be reached by the finger, by means of an apparatus attached to the finger, with a planchette at the back of the hand communicating with a pencil, which will trace out on a piece of paper all the movements of the finger. The instrument which is to perform this by no means easy feat, is the fertile invention of M M Mallez and Napoli—*Times and Gazette*

LONGEVITY OF SAVANS.—The Dean of the Paris Academy of Sciences, M Chevreul, has recently entered upon his 98th year. The following names of those who have served as Dean foot up, with their respective ages at the present time, to a remarkable degree of longevity, viz M Barthélemy Saint Hilaire, 78 years, M Charles Lucas, 80 years, M Boussingault, 81 years, M Dumont, 82 years, M Dumas, 83 years, M Milne-Edwards, 83 years, and M Mignet, 87 years

NECROLOGY

CUMMINGS, SILAS, M D, a native of and for fifty-five years an actively employed physician in the town of Fitzwilliam, N H. Born in 1803, died at his residence June 30, 1882. Educated at the common schools. Read medicine with the "family physician." He then graduated at Dartmouth Medical College 1827. Dr Cummings was the trusted physician of a large circle of personal friends in his own and adjoining towns. Was a member of, and an ex-president of, the New Hampshire Medical Society, from which Society he was a delegate to and became a member of the American Medical Association in 1849, and attended the meetings of 1855, '60 and '65. He was a friend alike to the rich and the poor, carrying the same conscientious cure to one as the other. G P CONN, MD

STEVENSON, JAMES S, M D, was born at Covington, Ky, and came to Baltimore forty years ago where he died Aug 3, 1882. The exact cause of his death is unknown to me, but it is supposed that he died from inflammation of the bladder. Up to within a few months of his death Dr S had been a hard student and an earnest worker in the profession. He devoted much of his time to surgery, and performed many difficult operations. Dr Stevenson was a well cultured gentleman and was quite up in matters outside of his profession, he was beloved by all that knew him, and but for his retiring manners could have made himself much more prominent in the community in which he lived. He attended the meeting of the American Medical Association which met at Cincinnati in 1850-'51, and always took a great interest in its welfare.

Respectfully,
WILLIAM LEE, of Maryland

THE Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY

VOL I

CHICAGO, NOVEMBER 24, 1883

No 20

ORIGINAL ARTICLES

GLYCOSURIA—ITS COMPLICATIONS AND THERAPEUTICS

BY OSCAR C. DE WOLF, A. M., M. D., PROFESSOR OF STATE MEDICINE, CHICAGO MEDICAL COLLEGE
COMMISSIONER OF HEALTH, CHICAGO

[Read before the Chicago Medical Society, November 19, 1883.]

In a former paper¹ I reviewed the pathology of glycosuria, designing in this to present a series of cases, but the literature of the complications of the disease has proven so voluminous, that I defer the grouping and detail of such cases as have come within my observation to a future time, confining myself now to an attempt to deduce a few rational principles of therapeutics from the mass of observations now before the profession. Glycosuria is a secondary complication of many diseases, the treatment of the primary affection cures the glycosuria without affecting it other than indirectly. The secondary nature of the glycosuria is ignored, and it is regarded as amenable to treatment which could affect it, if at all, only indirectly. Glycosuria appears and disappears under certain conditions with equal facility, whether treatment be followed or neglected. Such elements of error must be eliminated before the therapeutical relations of glycosuria can be determined. It, therefore, becomes necessary at the outset to pass in review the affections of which glycosuria is a secondary complication and the conditions which give rise to it, and, as a further ground for investigation, to discuss the secondary complications of the disease. The affections of which glycosuria forms a secondary complication are first and foremost the neuroses, hysteria is complicated by glycosuria of transitory, or relatively prolonged, duration, which may eventually in seeming glycosuric coma, but which disappears with the disappearance of the most marked hysterical symptoms, as witness the cases reported by Le Grand Saule,¹ Seegen,² Rognosi,³ Wagner,⁴ Shingleton Smith,⁵ Waterman,⁶ Marchal (de Calvi), and Kiernan.⁸ Braun,⁹ Eulenburg,¹⁰ Marchal (de Calvi)¹¹ and Rosenstein¹ have observed glycosuria during sciatica, which disappeared on recovery. Delpsch¹³ has had under observation a paretic dement, in whom glycosuria existed from the onset of the psychosis. During the apoplectiform and epileptiform attacks of that psychosis and after the gastric crises of locomotor ataxia, glycosuria has been noted. It has also been observed after epileptic convulsions, espec-

ally after the *status epilepticus*. Bumm¹⁵ finds that delirium tremens is often attended by more or less glycosuria.

Sciatic nerve stretching and section produces glycosuria, as witness the cases reported by Wiet,¹ Marcus and Schiff.³ Tetanus is at times complicated by glycosuria, as in the case reported by Vogel.⁴ Chorea major also at times co-exists with glycosuria, as in the case coming under the observation of Von Franque.⁵ It succeeds the choreic movements and continues till recovery. Cases reported by Fischer,⁶ Goolden,⁷ Fritz,⁸ Itzigsohn,⁹ Dompeling,¹⁰ Griesinger,¹¹ Plagge,¹ Kaemnitz,¹³ Mosler,¹⁴ and Ollivier,¹⁵ show that cerebral tumors, skull injuries, and apoplexy, bear a very similar relation to glycosuria.

Snell,¹⁶ Madigan,¹⁷ Cotard,¹⁸ de los Santos,¹⁹ and Kiernan,²⁰ report cases in which glycosuria and the psychoses alternate, during the mental disease glycosuria is not present and the appearance of glycosuria is an indication of recovery, its disappearance is the precursor of an attack of insanity.

Glycosuria is among the symptoms produced by certain drugs, amyl nitrite,¹ ammonia,² carbolic acid,³ carbon chloride,⁴ carbonic oxide,⁵ chloral hy-

¹ Boston Medical and Surgical Journal Vol CVI

² Les Hysteriques

³ Diabetes Mellitus auf zahlreichen beobachtungen

⁴ Lancet 1857

⁵ Ibid 1853

⁶ British Medical Journal April 7, 1883

⁷ Medical Record Vol 23

⁸ Recherches sur les accidents diabetiques

⁹ Gaillard's Medical Journal Sept 1883

¹⁰ Lehrbuch der Balneotherapie

¹¹ Cyclopaedie

¹² Op cit

¹³ Virchow's Archiv Band VII

¹⁴ Archives de Neurologie tome IV

¹⁵ Berlin Klein Woch No 25 1883

¹⁶ Gazette des Hopitaux May 24 1881

¹⁷ Ibid

¹⁸ Untersuchungen uber Zuckerbildungen in der Leber

¹⁹ Deutsches Archiv fur klinische Medicin Band V

²⁰ Jahrbucher fur Kinderheilkunde 1867

²¹ Archives generales de Medecine Tome XX

²² Lancet March 1862

²³ Gazette Hebdomadaire Tome VI

²⁴ Wagner General Pathology

²⁵ Neder Arch voor Geneeskunde Band VI

²⁶ Archiv der Heilkunde Band VIII

²⁷ Wagner General Pathology

²⁸ Ibid

²⁹ Ibid

³⁰ Gazette Hebdomadaire No 11 1875

³¹ Psychiatrisches Centralblatt Band XXXVIII

³² Journal Nervous and Mental Disease April 1883

³³ Annales Medico Psychologiques January 1880

³⁴ Lectures on Insanity

³⁵ Archives Generales de Medecine March 1877

³⁶ Harley Lancet 1857

³⁷ Hoffman, Archiv fur Anat und Phys, 187

³⁸ Own observation

³⁹ Eulenburg Op cit

⁴⁰ Revue Scientifique 1874

drate,²⁶ codeine,²⁷ corrosive sublimate,²⁸ curare,²⁹ eucalyptol,³⁰ hydrogen peroxide,³¹ iodoform,³² morphine,³³ nitro-benzol,³⁴ opium,³⁵ phosphoric acid,³⁶ quinine,³⁷ resorcin,³⁸ salicylic acid,³ soda valerianate,³⁸ turpentine³⁸ and uranium nitrate³⁹

It would appear that febrile conditions were capable of producing glycosuria sometimes of prolonged duration, thus Zinn¹ finds that in a large percentage of cases of scarlatina in nervous children, glycosuria results, Senator² states that intermittent fever is sometimes complicated by temporary glycosuria, Madigan³ has observed that vaccination, followed by marked rise in temperature in the insane, results in a temporary glycosuria, Gathgen has had similar experience with other febrile states. Conditions in which the respiration is involved, as in phthisis and cardiac diseases, are, especially if there be well-marked dyspnoea, often accompanied by glycosuria. Abeles⁴ has reported many such cases. In cholera glycosuria has been observed as a secondary complication by Huppert,⁵ Heintz,⁶ Wyss,⁷ Buhl⁸ and Gubler⁹

The complication of pregnancy by glycosuria was demed by Wiederhold,¹ Leconte,² and Griesinger³

Blot,⁴ Heller,⁵ C. G. Lehmann,⁶ Kinsten,⁷ Brucke,¹ Waterman,⁸ Henney,¹ Iwanoff,⁹ de Sinety,¹⁰ Ables,¹¹ Cazeaux,¹ and Hempel¹² have conclusively proven that this was an error. Bennewitz¹⁴ reports the case of a woman who was glycosuric at each successive pregnancy. J. Matthews Duncan¹⁵ concludes that glycosuria may come on during pregnancy and be present during the period of pregnancy only, or it may recur sometime after, or it may come on immediately after pregnancy. Bouchard¹⁶, Oppolzer,¹⁷ and Gibb¹⁸ have reported cases in which glycosuria coming on after pregnancy remained for a long period and sometimes permanently, in the first case it disappears suddenly. Mammary abscess and ablation are sometimes followed by glycosuria. Prout,¹ Garrod,² Snell,³ Bence-Jones,⁴ Stosch,⁵ Rayer,⁶ Contour,⁷ Schmitz,⁸ Claude Bernard,⁹ and Charcot¹⁰ have demonstrated that gout alternates sometimes with glycosuria, and that it precedes very often a glycosuria, which thereafter co-exists with it. A. Jacobi¹¹ has recently reported a case of this latter type. The vaso-motor changes concomitant on senility are, as might be expected, *a priori*, attended by glycosuria generally of an intermittent type and often destitute of well-marked symptoms, concerning it Charcot¹⁰ says "the urine is, as a rule, only slightly increased in amount and the thirst may not be at all marked." It will be obvious from what has been already said that in conditions in which marked cerebral circulatory changes occur, whether from the administration of drugs, from pyrexia, or secondary neuroses, glycosuria may occur, that it may be of temporary duration, may present mild constitutional symptoms and disappear without special treatment. The fact that senility gives rise to an intermittent glycosuria shows the error involved in the report of mild cases of glycosuria, occurring after sixty, as being cured by treatment. The existence of a hysterical type of glycosuria explains the frequent reports of cures of "mild cases of glycosuria in women." The existence of a mild type of glycosuria related to

gout seems to lend probability to the view of Bence-Jones¹ that gout and glycosuria were diseases of sub-oxidation. While this is not impossible, the origin of the sub-oxidation still requires explanation and Dyce-Duckworth² has shown that gout itself is a trophoneurosis. From the facts cited it is evident First That the apparent improvement of glycosuria under treatment in a parietic dement, an epileptic, hysteric, a pregnant woman, gouty individual, or an old person is not of value as evidence of the influence of such treatment on glycosuria. Second That any of these conditions may give rise to a permanent glycosuria of a mild type. The subject can be best discussed in its other relations after an examination of the secondary complications of glycosuria.

Marchal³ (de Calvi) has very aptly said that the neurosis occurring during glycosuria have been very frequently regarded as of primary origin, when in reality they were consecutive. Ogle⁴ expresses the same opinion. Bouchardat⁵ says that neuroses appear to be very frequent among glycosurics who are great meat eaters and take more alcohol than is good for them. Bouchard⁶ has not found these two articles of

²⁶ Kane Drugs that Enslave

²⁷ Own observation

²⁸ Rosenbach

²⁹ Own observation

³⁰ Own observation

³¹ Bericht der Chemisch Gesell 1883

³² Own observation

³³ Kane Op cit Levenstien Morphiumsucht

³⁴ Ewald

³⁵ Pavy Op cit

³⁶ Kulz, Deutsch Arch f Klin Med Band XLII

³⁷ Almen

³⁸ Leconte

¹ Zeimssen's Encyclopædia Jahrb f Kinderh B XLX

² Hôppe Sycler Med Chem Unters III

³ Chicago Medical Review, July 15 1882

⁴ Wiener Med Woch, 1874

⁵ Archiv der Heilkunde Band VIII

⁶ Senator Op cit

⁷ Journal de Therapeutique 1878

⁸ Archives Generales de Medecine August 1857

⁹ Journal de Therapeutique, 1878

¹ Zeimssen's Cyclopedia

² Journal de Therapeutique 1878

³ Op cit

⁴ Archives Generales de Medecine, Aug 1857

⁵ Comptes rendus XLIII

⁶ Lehrbuch der Physiol Chem I

⁷ Monatschrift f Geburtsh June, 1857

⁸ Op cit

⁹ Diss Dorpat 1861

¹⁰ Gazette Medicale, No 45 1873

¹¹ Op cit

¹ Obstetrics

² Hufland's Journal Band LXL

³ Archiv f Synal Band VIII

⁴ Trans Lond Obstet Soc vol XXXVI

⁵ Clinique Europ, No 58, 1859

⁶ Duncan, Op cit

⁷ Medical Times and Gazette July, 1858

¹ Gastric and Renal Diseases

On Gout

Op cit

⁴ Med Chir Trans vol XXXVI

⁵ Lehrbuch der Diabetes

⁶ Gazette Medicale, vol X

⁷ These de Paris, 1844

⁸ Stosch Op cit

⁹ Leçons de Physiol Exper

¹⁰ Maladies de la Vieillesse

¹¹ New York Medical Journal, vol XXXVIII

¹ Op cit

² British Medical Journal March, 1881

³ Op cit

⁴ St George's Medical Reports, Vol I

⁵ Op cit

⁶ Maladies par la Retardissement de la Nutrition

diet to be the exciting causes of glycosuric neuroses Bernard and Féré are of opinion that the neurotic complications of glycosuria are an expression of the constitutional condition on which glycosuria depends, and are not due to hyperglycæmia Glycosuria frequently vanishes from the urine just prior to cerebral complications They divide the neurotic complications of glycosuria into lesions of motility, of general and special sensibility, of the intelligence, and of trophic functions Among the most marked motor affections may be cited the fatigue, lassitude, deprivation of muscular energy, whose clinical value Marchal¹ (de Calvi) was the first to point out This affection does not depend on muscular weakness pure and simple, it may be so well marked as to lead to suspicion of a medulla affection One such case has been described by Laségue² This condition is not always well marked, it may suddenly disappear, to return as suddenly, it may occur first in consequence of a slight traumatism Paralyzes, properly so-called, are rare in glycosuria, they are often localized, partial, and incomplete They may appear subsequent to an attack of apoplexy, as in a case reported by Laségue² A young man was attacked by apoplexy with complete coma, followed by hemiplegia, recovery from which was rapid, the same phenomena recurred the next year Aitken³, Copland⁴, and Watson⁵ have reported similar cases Sometimes a sudden loss of consciousness occurs, which is rapidly recovered from without any resulting paralytic phenomena Vertigo sometimes occurs alone, and sometimes precedes paralysis Paralytic symptoms occur, as a rule, without vertigo or loss of consciousness Hemiplegia may be attended by bizarre phenomena One of Charcot's⁶ patients was one night attacked by left hemiplegia, at the same time monoplegia of the right eyelid made its appearance (monoplegia is so frequent an accompaniment of glycosuria, that Bernard⁷ and Féré claim that the urine should be examined in every case of this kind) Ogle⁸ reports a case in which paralysis of the right arm and face, hesitancy in speech, ptosis, dilatation and strabismus followed upon the disappearance of glycosuria Kinnicut⁹ and Gregori¹⁰ report similar cases, and such cases are far from exceptional The monoplegias may be only paretic in character, and extremely transitory The speech troubles are, as a rule, due to buccal dryness, but true aphasia does occur Aphonia from laryngeal paralysis is far from exceptional Imperfect muscular coordination in the dark, attended by formation in the extremities, is sometimes noticed, and may, as in a case reported by Stockvis¹, lead to a suspicion of locomotor ataxia A case of cervical paraplegia, followed by respiratory difficulty, in which death occurred, has been observed by Lecadre²

Kiwatowski¹ has reported a case of paralysis of the patheticus, Féré⁴, a case of paresis of the right extensor Galezowski⁵ says that paralysis of the ocular muscles occur during the incubation of glycosuria, and that the muscles innervated by the sixth pair are most affected, the paralysis is sometimes only monocular It usually occurs early, is not accompanied with pain, and is marked by double vision, in which one object is colored Paralysis of the third pair is

marked by crossed diplopia Patheticus paralysis, which is rare, gives rise to a not very decided homonymous diplopia

Cramps and convulsions also occur Cramps often attack the lower extremities especially at night, in which case it is an important element in the production of insomnia, the first indication of cerebral circulatory development, and it may be the precursor of serious complications Convulsions may be associated with coma or may accompany paralytic phenomena, they present at times the monoplegic epileptic character and alternate with transitory paralysis of the same side Vertigo may assume and epileptoid character

It is of interest from the standpoint of pathogeny to note that paralysis may appear before sugar is detectable in the urine, at the time of its disappearance, or some time thereafter

These motor phenomena are, in the main, due to rapid vaso-motor changes of central origin Such an extended character and so great a number of motor phenomena point very decidedly to the inference that in all types of glycosuria, vaso-motor perturbations of decided character and central origin, occur It is also evident that coincident with or precedent to the appearance of glycosuria, the vaso-motor centers are affected

Complete anæsthesia is rare, anæsthetic patches on the thigh have been observed by Laségue¹ Dionis² has observed a case in which both ears were anæsthetic to heat and were persistently cold, a year later they become gangrenous Neumann³ has been able to pull hair out of one of his patients without its being noticed Patients often complain of pressure, coldness or numbness of the extremities, particularly of the lower extremities Hyperæsthesia occurs in patches and may be present without any co-existing symptoms other than saccharine urine Glycosurics are very sensitive to external heat and frequently complain of illy defined pains attended by lassitude in the lumbar and dorsal regions, sometime in the cervical, these last were met with in one half of Leudet's¹ cases, the pain resembles the so-called "fox bite" made by boys as a practical joke Coitus often induces it, and with it cervical stiffness co exists very frequently Headache comparable to the weight of a leaden cap is far from infrequent These pains may take on a neuralgic type Drasche,² like

¹ Archives de Neurologie tome IV

² Op cit

³ Journal de Med et de Chir 1887

⁴ Science and Practice of Medicine

⁵ Dictionary of Medicine

⁶ Lectures on Physic

⁷ Op cit

⁸ Op cit

⁹ Medical Record Aug 25 1883

¹⁰ These de Paris 1883

¹ Archives de Neurologie tome IV

² Cited by Marchal (de Calvi)

³ These de Paris, 1881

⁴ Op Cit

⁵ Journal de Therapeutique Feb 1883

¹ Op Cit

² Moniteur des Hôpitaux 1857

³ Clinique Med p 315

¹ Bernam and Fere Op Cit

² Wiener Med Woch Jan 1882

Worms³ and Buzzard,⁴ finds glycosuric neuralgiæ have a tendency to symmetrical development and an agonizing character Schmitz⁵ found that while crural neuralgiæ were not uncommon, sciatic and lumbar were infrequent, he had observed a few cases of cervico-occipital neuralgia and of mastodynia Drasche⁶ had a case of symmetrical intercostal neuralgia When the right side only is affected this is coincident with painful sensibility of the liver, which Léchorche⁶ believes depends upon hepatic congestion Pruritus vulvæ is very frequent among female glycosurics and Leroux¹ has found general pruritus present in a large number of cases Sexual impotence occurs and is accepted with apathy In cases where this occurs early there may be frequently found accompanying and preceding it, according to Verneuil,² induration of the corpus cavernosum

Asthma, other respiratory neuroses and exophthalmic goitre may make their appearance early in glycosuria and may be as transitory as other glycosuric neuroses Deafness is relatively frequent among glycosurics, it is sometimes slight and fleeting, sometimes complete In Prout's¹ opinion it, as a rule, is of purely neurotic origin Cases like that of Renaudin,¹ however, exist, in which deafness results from otitis media Trousdale⁵ reports a case in which otalgia preceded hemiplegia and fatal coma

Jordao,⁶ Leudet⁷ and Lecorche⁸ have observed cases in which smell and taste were abolished or perverted

It is difficult to determine whether glycosuric keratitis, iritis, or irido choroiditis are due to hyperglycæmia, *per se*, or to concomitant neurotic lesions Leudet's¹ case would seem to indicate that both these factors played a part at times Panas⁷ insists that a keratitis of unknown origin and rapid course calls for urinalysis, which is also the opinion of C J Lundy³ and Countourous⁴ Probably eight-twelfths of the glycosurics manifest eye symptoms Marchal⁵ (de Calvi) distinguishes glycosuric amblyopia, properly so called, from simple visual perversion Alcon⁶ has noticed in an emmetropic 61-year-old woman, of healthy antecedents, in whom glycosuria developed after a skull injury, that simultaneously sight became unimpaired and hypermetropia was evident, vision was reduced one-half The sugar gradually disappeared from the urine, and, *pari passu*, the hypermetropia Five months after the receipt of the injury the patient was again emmetropic, and sugar was no longer detectable in the urine Dionis⁷ had a patient affected with glycosuria who saw all objects to the left of their real position and turned half upside down All varieties of accommodative asthenopia are observed, these vary greatly, and are more marked with hypermetropes than with emmetropes, more marked with these last than with myopes Glycosuric amblyopia is either slight or grave, and is often the only complication, objects are seen in a yellowish background Glycosuric presbyopia early occurs and affects the two eyes unequally, it varies at different times Panas⁷ finds that the latter condition results from accommodation-paresis, and the patient seems to be amblyopic, it is found, however, on examination of the ocular fundus, that, at most, a

slight papillary congestion exists All these varieties of accommodative asthenopia are, in Panas⁷ opinion, only an expression of the constitutional condition With these visual troubles, vertigo—a secondary consequence of them—may coexist Cataract, as has been pointed out by Galezowski¹ and Lundy,³ may coexist with, and mask the other ocular phenomena The onset of amblyopia is sometimes sudden, often insidious, sometimes dyschromatopsia accompanies it Hemipopia has been observed by Bonchardat,¹ v Grafe² and Bellouard³ Concerning it, Galezowski⁴ says "Some glycosurics find their visual troubles gradually develop until, for some reason, they cannot see as clearly In other cases the patient, after a violent headache, sees objects in a broken manner, and is at the same time diplopic Others, after hemipopia, find that vision has suddenly diminished in one eye In other cases, after an attack of vertigo approximating apoplexy, the patient, on recovery, finds himself blind, but this total blindness is soon succeeded by hemipopia" Hemipopia, in Galezowski's⁴ opinion, is very frequently associated with glycosuria

In certain cases retinitis is observed which does not differ greatly from albuminuric retinitis The cases observed by Laber,⁵ Panas,⁶ Mialhe,⁷ Noyes,⁸ Haltenhof,⁹ Jager¹⁰ and Desmarres¹¹ show that glycosuria alone can produce such retinitis Galezowski¹ says that glycosuric retinitis is characterized by hæmorrhages, at times few, at others numerous sometimes limited, and sometimes markedly extensive Their multiplicity shows how extensively the vessels are affected and how frequent the rupture of the walls By the side of these hæmorrhages are to be noticed yellow patches of exudation, sometimes pretty numerous, these shining patches are produced by extravasation of fibrin into the retinal tissue, and, as a rule, exist from the onset Glyco-

³ Bull. del Acad. de Med. T. IX. S. 20

⁴ Lancet Vol. 1. 1882

⁵ Op. Cit.

⁶ Gazette Hebdomadaire 1881

¹ These de Paris 1881

² Revue Med. Dec. 10. 1880

³ Op. Cit.

⁴ Ann. des Mal. de l'oreille et du Larynx Jan., 1882

⁵ Clinical Medicine

⁶ Senator Op. Cit.

⁷ Op. Cit.

⁸ Op. Cit.

⁹ Op. Cit.

¹⁰ Op. Cit.

¹¹ Ann. d'Oculistique, 1881

¹² Mich. Med. News June 1880

¹³ These de Paris, 1883

¹⁴ Op. Cit.

¹⁵ El Giglio Medico January, 1880

¹⁶ Op. Cit.

¹⁷ Op. Cit.

¹⁸ Op. Cit.

¹⁹ Op. Cit.

²⁰ Op. Cit.

²¹ Op. Cit.

²² Grafe's Archiv. Band IV

²³ These de Paris 1880

²⁴ Op. Cit.

²⁵ Archiv. f. Ophthalm., 1875

²⁶ Op. Cit.

²⁷ Archiv. f. Ophthalm., 1873

²⁸ New York Medical Journal 1873

²⁹ Monatsb. f. Augenheilk., 1873

³⁰ Senator Op. Cit.

³¹ Ibid.

³² Op. Cit.

suric retinitis frequently results in optic nerve atrophy. The functional troubles vary from simple amblyopia to complete blindness. Hæmorrhagic retinitis may produce complications on the side of the choroid, iris, and crystalline lens. Weinberg² and Dufresne³ have reported cases which confirm Galezowski's¹ views. Desmarres⁴ regards hæmorrhagic retinitis as a precursor of oncoming cerebral hæmorrhage. Heyl⁵ describes a lipæmia of the retina. Galezowski¹ claims that cataract, which occurs in about ten per cent of the glycosurics, is frequently the result of retinitis, as a rule both eyes are affected, but the morbid process does not advance in each with equal rapidity. Seegen¹ states that it is due to an impairment of the nutrition of the crystalline lens, and increases with increased excretion of sugar, but this, according to Griesinger, is not an invariable rule, cataract occurs in advanced cases, as a rule, but is sometimes the first symptom of the disease to be noticed. Unilateral sweating has been observed by Koch,³ Kulz,⁴ and Nitzelnadel.⁵ The mental condition of glycosurics is often affected. The patient becomes depressed or apathetic, an apathy, interrupted by frightful dreams, or complete as in the cases described by Le Grand du Saulle,⁶ Durand-Fardel⁷ is of opinion that this apathy is due to the general enfeeblement. Cotard,⁸ Madigan,⁹ de los Santos,¹⁰ Zimmir,¹¹ Fleury,¹² Schmitz,¹³ Marchal¹⁴ (de Calvi), Seegen,¹ Snell¹⁵ and Kiernan¹ have reported cases of glycosuric insanity marked by depression. Bernard⁷ and Feré state that coincident with the motor symptoms the mental enfeeblement of parietic dementia makes its appearance.

Trophoneuroses are not wanting in glycosuria, some patients present affections nearly resembling those observed in spinal cord diseases. Clement³ has observed perforating ulcer of the foot in no way distinguishable from that resulting from spinal affections or from parietic dementia. Leudet⁴ and Cantani⁵ have observed localized skin atrophies similar to those due to lesions of the anterior cornua. Quermonne⁶ and Fere have observed dermic vegetations of like character. Magitot⁷ has observed changes in the lower jaw and alveolar border of both jaws, which, he claims, are pathognomonic of the disease. Feré⁸ and Dickinson⁹ have observed muscular atrophies undistinguishable from those of neurotic origin.

The subject of coma was partially discussed in the preceding paper, but since that has appeared some additional researches have come to hand. Frerichs⁹ claims that in one group of cases death occurs from cardiac failure due to cardiac degeneration. The other groups are the result of intoxication, a series of changes take place in the blood the ultimate products of which, aceto-acetic acid and acetone are known, but the initial products are not. Jaksch¹⁰ finds that there are four types of acetonuria. Febrile acetonuria, glycosuric acetonuria, acetonuria from cancer, acetonæmic acetonuria. He has also found that acetonuria results from hydrophobia. The occurrence of acetonuria in this latter disease points to vaso motor perturbation as the cause rather than the result of acetonæmia. This is further borne out by the observations of Mackenzie¹¹, who has never been

able to detect acetone in the breath, and but rarely in the urine of comatose glycosurics and his autopsy results have been equally negative as regards acetone. My experiments with the injection of acetone into glycosuric dogs have had negative results. The lipæmia theory seems equally untenable for injection of finely divided fat is without effect and Mackenzie¹ has found that lipæmia is not a constant attendant on glycosuric coma. Hilton Fagge,² believing that blood dehydration was a cause of coma, injected saline solutions into the veins with temporarily favorable results, this theory is also held by Feré⁸ and T. A. McBride.⁴ Ebstein⁶ is of opinion with Senator⁶ that acetone retention is the cause of coma and this retention is due to changes in the renal epithelium, but this only adds increased difficulty to the acetone theory for, despite the fact that molecular renal epithelial changes might produce this result in cases where renal changes are not demonstrable, still many cases in which marked renal changes exist do not become comatose. Teschenacher⁷ suggested that a shock to the sympathetic from changes going on in the intestine was the cause of coma, and Saundby⁸ is inclined to the same opinion. Taking into account the facts, that all types of coma can be produced without the presence of acetone, that there are apoplectic as well as epileptoid types, that coma may occur early in the disease, that physical and mental strain is detectable as the exciting cause in the great majority of cases, and recognizing that hysterical and epileptoid attacks may occur from the same exciting causes, it would seem that Pavys's¹ theory somewhat modified will best explain all cases, Teschenacher's² theory is only a modification of this. I regard coma as the response to a sudden strain upon an unstable

²Centralb f. Augenheilk. Band VI

³Gazette Hebdomadaire, Nov 7, 1861

⁴Ibid

⁵New York Medical Journal Vol. XVII

¹Op. Cit.

²Op. Cit.

³Diss. Jena

⁴Senator Op. Cit.

⁵Ibid

⁶Gazette des Hôpitaux 1877

⁷Op. Cit.

⁸Op. Cit.

⁹Op. Cit.

¹⁰Op. Cit.

¹¹Deutsche Klinik 1867

¹Gazette Hebdomadaire 1873

¹²Op. Cit.

¹³Op. Cit.

¹⁴Op. Cit.

¹⁵Op. Cit.

¹Op. Cit.

²Op. Cit.

³These de Paris, 1881

⁴Op. Cit.

⁵Il Morgagni 1881

⁶Op. Cit.

⁷Journal de Médecine de Bordeaux Jan 1 1882

⁸Nervous Diseases in Diabetics

⁹Berlin Clin. Woch. March 1883

¹⁰Zeitschrift f. Clin. Med. Nov 1882

¹¹British Medical Journal April 7 1883

¹Op. Cit.

²Guy's Hospital Reports v. xix

³Op. Cit.

⁴Med. Record Aug 25 1883

⁵Senator Op. Cit.

⁶Op. Cit.

⁷Mackenzie Op. Cit.

⁸British Med. Journal, April 7 1883,

¹Op. Cit.

²Op. Cit.

vaso-motor system, the instability of which is due to the constitutional condition which produces glycosuria, the neuro-patho-anatomical changes found by Pavy¹ and Dickinson² show that decided vaso-motor perturbations mark the course of the disease, the aforesaid changes being obviously secondary to these.

That the lungs are often affected in glycosuria has long been recognized, phthisis and pneumonia are far from infrequent. Leyden⁴ states that glycosuric phthisis has an insidious onset, febrile phenomena are absent, expectoration is slight and hæmoptysis is infrequent. Endarteritis obliterans is a prominent lesion. Tuberculosis may be a primary affection, but from this the type of phthisis just described is distinct. Glycosuric pulmonary gangrene has an odorless sputa and the symptoms are not marked, it is obvious that glycosuric phthisis and pulmonary gangrene resemble the same diseases as found in the insane. Lecorche¹ calls attention to a glycosuric endocarditis which is much more frequent among females than males. It appears late in the disease and more often in the milder forms. It is generally seated at the mitral orifice and but rarely involves the aortic. Its presence is indicated by an apex murmur and an irregular, intermittent pulse. Frerichs³ claims that renal disease and glycosuria do not co-exist as often as has been supposed, of three hundred and sixteen cases coming under his observation only sixteen gave evidence of renal disease, and of these sixteen but three were pure. Senator⁵ states that in the majority of cases renal lesions are found. The kidneys are as a rule abnormally large, firm, and heavy, containing an abundance of blood, but no evidence of textural changes is presented. True nephritis is rare, renal pelvis and the ureters are frequently affected. Vesical catarrh is very frequent and gives rise to a symptom of glycosuria-pneumaturia, to which attention has been recently directed by Guiard.⁴

Marchal¹ (de Calvi) was of opinion that "in cases of obstinate furunculosis, of carbuncle, of diffuse phlegmonous inflammation, gangrene, etc., the urine should be examined for sugar," this opinion has since been confirmed by other observers. Roser² states that in all cases of gangrene or ulceration without obvious cause the urine should be examined, since many such cases are due to glycosuria and not to sepsis. Myosuria is very common, and points to an explanation of muscular weakness. In certain cases of the lean variety of glycosuria the pancreas is demonstrably involved, and in others pancreatic affections are very probable. This involvement is coincident with or antecedent to glycosuria, and in all probability is a great factor in the production of emaciation. The same is true also of gastric and intestinal affections.

Senator³ states that all febrile affections occurring during glycosuria affect it favorably, but this rule is not invariable, the fat form is made worse by high pyrexia and the lean by typhoid fever. The fat type has been favorably affected by dysentery. The peculiarities of the coma and of the other complications can be best explained on the vaso-motor neurosis theory of the disease. Phthisis of the kind indicated is, as already stated, a very frequent complication of

the vaso motor psychoses. Renal disease is as infrequent in them, despite very favorable circumstances, as it is in glycosuria. Ross¹ says "The vaso-motor nerves of the liver take their origin on the floor of the fourth ventricle and pass through the cervical and upper dorsal regions of the spinal cord and the *rami communicantes* opposite the fourth or fifth dorsal vertebra, to join the sympathetic, and ultimately enter the organ as the hepatic plexus. Injury to these fibres at their origin in the fourth ventricle, in any part of the spinal cord, or of the sympathetic itself, is followed by glycosuria." Frumet² de Fontarce is of like opinion. On careful examination there is found precedent to most of the reported cases cerebral hyperæmia from overwork or anxiety, and at the same time extra strain on the digestive apparatus. In certain cases predisposed by heredity or injury these two influences act in a vicious circle, the hyperæmia acts on the cerebral vaso-motor center to increase the digestive difficulty and to produce *per se* glycosuria. The digestive difficulties act through the sympathetic on the vaso-motor centre itself in an indirect manner, as explained by Senator, to cause glycosuria. From this inter-action in a vicious circle the vaso-motor centre becomes perverted and glycosuria remains a permanent condition. In a second class of diseases digestive difficulties arising from mental overwork produce cerebral anæmia, which results in changes of the functions of the pancreas and intestines, and finally in the structure of those organs, already weakened by digestive strain. The cerebral anæmia interferes with the function of the cerebral hepatic fibres and at the same time a gastrointestinal condition reacts on the cerebral condition and the lean form of glycosuria is the result. In some cases tuberculosis is the origin, at once, of the intestinal and cerebral conditions.

This theory explains many seemingly contradictory facts, it explains at once why pyrexia should cause and improve glycosuria, it explains why glycosuria occurs after apoplectic and epileptic attacks, it explains why opium on the one hand and chloral on the other should cause glycosuria, and why the first should benefit it, it explains the varied glycosuric neuroses, the peculiar phthisis and other complications.

Therapeutics can now be discussed with some clearness. The treatment by drugs is the first matter requiring analysis. The drugs used can be divided into two great classes, those acting on the digestive organs and those acting on the brain, the latter are again divisible into those producing cerebral hyperæmia and those producing cerebral anæmia. Among those acting on the digestive organs may be mentioned the alkaline waters. Cornillon,¹ for example,

¹ Op cit
² Zeitschr f Clin Med Band IV

³ Op cit
⁴ Deutsch Med Woch No 24 1883

⁵ Op cit
⁶ Annal des Mal Gen Urin June 1883

⁷ Op cit
⁸ Deutsch Med Woch 1880

⁹ Op cit
¹⁰ Diseases of the Nervous System

¹¹ Path Clin du grand Sympathétique

¹² Op cit

¹³ Progres Med, Jan 1880

claims that the use of these is attended by very decided amelioration, and that the use of the alkalies seem to reestablish the functions of the digestive organs. This testimony only corroborates that of Senator,² Seegen,³ Kretschy,⁴ Kulz,⁵ and others. It will be obvious that the alkaline waters act only on the digestive organs, and remove or modify one element of the vicious circle which produces glycosuria. On the theory already given, their use would be indicated in both varieties, but most in the anæmic, and in this they have given very favorable results. Potash permanganate recently used by Mason,¹ had an influence on the digestive organs, and to this, if anything, is due what influence it has on glycosuria. To the same origin may be ascribed the favorable effects attendant upon the use of lactic acid, advised by Cantani,⁷ and of soda citrate, advised by O. C. Knight.³ On the same principle, we may explain the results obtained from the administration of calcium, by Dare,⁴ Flint,⁵ Halstead,⁶ and others, more especially as Fleury⁷ has shown that the evolution of sugar is attended by the evolution of free sulphur, which would be checked by the presence of a sulphur compound tending to produce retrograde metamorphosis. Ammonia is claimed by Adamkiewicz⁸ to act in like manner, but it is obvious that its action on the brain might interfere with its action on the digestive organs, and in the fat cases, it has been shown by Guttmann⁹ to exert a deleterious influence. Uranium nitrate is another agency acting chiefly on the digestive organs, and sometimes on the brain. To this combined action can be referred the good results obtained by de Cailhol,¹ Dale,² and H. A. Wilson.³ Opium and its alkaloids are the drugs whose action in producing cerebral hyperæmia is most marked, and whose effects have been found most decided in the lean form by Ætius,⁴ Pavy,⁵ Shingleton Smith,⁶ Watson,⁷ Senator,⁸ Tyson,⁹ Rollo,¹⁰ Kratschmer,¹¹ Pelham,¹² Warren, Aitken,¹³ Image,¹⁴ and others. Codeia and its salts are for many reasons to be preferred, and, according to Pavy,⁵ are capable of effecting a cure without other treatment, one case reported by him seems to have been of hysterical origin, and, therefore, of doubtful value. Brunton¹⁵ confirms Pavy's results. Iodoform, an agent capable of producing cerebral hyperæmia, has been found useful in glycosuria by Moleschott¹⁶ and Bozzolo.¹⁷ Peroxide of hydrogen, which has a like property, was found of value by Day.¹⁸ Salicylic acid, which also produces cerebral hyperæmia,¹⁹ has given good results in the hands of Ebstein.¹⁹ Pilocarpine acts on the brain in like manner, and has been found by Charteris¹ to yield good results. Carbolic acid and creosote, which also produce cerebral hyperæmia, have been found useful by Millard,² Blau,³ Thoresen,⁴ Ebstein,² J. Muller,⁵ Berndt,⁶ Hufeland,⁷ Kraussold,⁸ and Boese.² Quinine, which has been shown by Hammond and Roosa to produce decided cerebral hyperæmia, has been found very effective in glycosuria by Blumenthal,² Mayer, Deihl,² and Carlati,³ who has for the same reason found eucalyptol of value.

Of the agents producing cerebral anæmia, ergot has been found of value by Tyson,⁵ Hunt,⁴ and oth-

ers. Arsenic, from the fact that it exerts a direct influence on the vaso-motor centers of the medulla, that it diminishes the amount of blood in the brain, has been attended with by far the best results. It will prevent the temporary glycosuria produced by puncture or irritation of the fourth ventricle, a fact which was first noticed by Quinquand,⁶ whose results were confirmed by Longueville⁷ and which I have personally verified. The drug has been found of great value in glycosuria by Flint,¹ Pavy,² Longueville,³ Clemens,⁴ Leube,⁵ Berndt,⁶ Senator,⁷ W. L. Lehmann,⁸ Devergie,⁹ Tyson,¹⁰ Gillford,¹¹ Emmerling,¹² Bokai,¹³ and others. The bromides were early proposed by Begbie¹⁸ and have been found of value by Flint,¹⁴ Vantraa,¹⁵ Dujardin-Beaumetz¹⁶ and others. The potassium salt is contra-indicated because of its being a muscle poison, and therefore tending to set free inositol and thus weaken the muscles. Bromine has a most decided action on the liver, a fact to which attention has been called by Jewell.¹⁷ The combinations lately made of bromine and arsenic seem likely to be of especial value. Taking all the facts cited into consideration it is obvious that there is no specific for glycosuria.

- ² Op cit
- ³ Op cit
- ⁴ Senator Op Cit
- ⁵ Op Cit

- ¹ Bull del Acad Ro de Med Belg XVI 1882
- ² Morgagni 1881

- ⁷ Op Cit
- ³ Detroit Lancet Sept 1883
- ⁴ Ann Lanc and Clin Dec 11 1880
- ⁵ Amer Med Weekly July 5 1881
- ⁶ Jour of Cut and Ven Dis 1883
- ⁸ Op cit
- ⁹ Revue de Therap 1887
- ¹⁰ Berlin Klin Woch No 38 1880

- ¹ St Louis Clin Record July 1878
- ² Boston Med and Surg Journal Vol C
- ³ Medical Bulletin March 1880
- ⁴ Pavy Op cit
- ⁵ Op cit
- ⁶ Op cit
- ⁷ Op cit
- ⁸ Op cit
- ⁹ Op cit
- ¹⁰ Tyson Op cit
- ¹¹ Ibid
- ¹² Ibid
- ¹³ Op cit
- ¹⁴ Tyson Op cit
- ¹⁵ British Med Jour 1874
- ¹⁶ Wien Med Woch No 17 1882
- ¹⁷ Gazzeta degli Hospitali Feb y 4 1883
- ¹⁸ Australian Med Jour July 1882
- ¹⁹ St Petersburg Med Woch an 14 1883

- ¹ Lancet Sept 5 1880
- ² Senator Op cit
- ³ Schmidt's Jahrb B CLVII, 1873
- ⁴ Practitioner Sept 1880
- ⁵ Op cit
- ⁶ Bull gen de Therapeutique Sept 30 1887
- ⁷ Journal de Therapeutique July 15 1883

- ¹ New York Med Jour June 30 1883
- ² Wien Med Presse 1875
- ³ Op cit
- ⁴ Berlin Klin Woch 1887
- ⁵ Tyson Op cit
- ⁶ Senator Op cit
- ⁷ Op cit
- ⁸ Academ Proefschrift 1873
- ⁹ Gazette Med No 22 1870
- ¹⁰ Op cit
- ¹¹ Pittsburgh Med Jour July 1883
- ¹² Med and Surg Reporter June 10 1883
- ¹³ Orvosi Hetilap No 1 to 3 1883
- ¹⁴ Op cit
- ¹⁵ Senator Op cit
- ¹⁶ Progress Med July 29 1883
- ¹⁷ Chicago Med Rev Vol 1
- ¹⁸ Lancet 1866

Hygienic treatment The glycosuric should indulge in moderate exercise, breathe pure air and bathe frequently in water in which a little soda has been thrown. All business worry and intellectual strain should be avoided. If the patient be a physician inclined to hypochondria all glycosuric literature should be prohibited.

The complications which require special treatment are the vesical catarrh, the balanoposthitis and the coma, in the first Guirard has found solutions of silver nitrate (1 to 500) and of boracic acid (1 to 20) of considerable use. Cleanliness and the use of weak antiseptic solutions will soon cure the balanoposthitis, Simon recommends that the inside of the prepuce be covered with the following powder

R—Zinc oxid $\frac{5}{1}$
Amyl $\frac{5}{1}$
Acid Salicyl Pulv $\frac{5}{1}$ —M

It is obvious from what has been said that the two great indications in coma are, to sustain the heart's action, and to produce derivation from the brain. This last is doubly indicated in cases where the exciting cause of the coma is the occurrence of fermentative changes in the intestine. Schmitz and Shingleton Smith have had results of value from following these indications.

The dietetic treatment is all important, and the table given by Tyson¹⁰ is of sufficient value to merit recommendation.

Conclusions First — Glycosuria, properly so-called, is met with in two forms, one due to cerebral anæmia—the "lean form," the other due to cerebral hyperæmia—the "fat form." In both digestive derangements act in a vicious circle on the cerebral condition. The indications, therefore, are to modify the cerebral circulation and to relieve the digestive derangements. The last can be accomplished by dietetic treatment, by proper hygiene, and by the use of remedies like the alkaline waters. The first is accomplished indirectly in the manner just described, and directly by the use of opium, codeine, morphine, quinine, salicylic acid, iodoform, carbolic acid, etc., in cerebral anæmia, in cerebral hyperæmia by the use of arsenic, the bromides, ergot, etc.

Second — In cerebral anæmia it may be desirable to alternate the agents useful in that condition, and a combination of quinine and codeine or quinine and morphine, or quinine and glonoin, can be used with advantage.

Third — In judging of the effects of treatment the fact that senility, pregnancy, hysteria, epilepsy and other nervous diseases, cause prolonged intermittent types of glycosuria should not be forgotten.

Fourth — In certain cases of glycosuria there is a normal equilibrium nearly established, for which reason dietetic or other treatment may *per se* prove curative.

Fifth — A combination of the alkaline waters and the cerebral agents mentioned is likely to be of value in all cases, the cerebral agents being varied to suit the case.

Sixth — That in all probability most if not all cases of coma in their early stage do not have a toxic ele-

ment about them and are therefore remediable by intestinal derivation. In all cases, cardiac stimulation is indicated, and at no stage is either intestinal derivation or cardiac stimulation contra-indicated.

Seventh — That small doses of pilocarpine may be found of value in treating dryness of the mouth and that mild antiseptic washes are useful in relieving uncomfortable sensations therein.

Eighth — That it is probable that temporary glycosuria, resulting from pregnancy, etc., becomes permanent when the patient is exposed to too much mental or physical strain.

TREATMENT OF THE OMENTUM IN OPERATIONS FOR OBSTRUCTED OR STRANGULATED INGUINAL HERNIA.

BY J. R. WEIST, M.D., RICHMOND, IND.

[Read before Union District Medical Society, Oxford, Ohio, Oct. 25, 1883.]

When operating for obstructed or strangulated inguinal hernia, the surgeon is frequently embarrassed by questions that arise in relation to the best method of dealing with the omentum so often found in the hernial sac, as he generally finds this structure greatly changed from its normal condition, by either inflammation or hypertrophy, the latter condition being commonly met with in old cases of irreducible hernia.

The omentum is well known to be much less capable of resisting the effects of inflammation than the intestine, this is especially true when it is loaded with fat, as it nearly always is in corpulent subjects. In such cases a degree of compression that only very slightly endangers the bowel is sufficient to deprive it of vitality. At the same time the visible effects of inflammation of the omentum are less marked than in the bowel. The bowel when dangerously inflamed is greatly discolored, and the arborescent arrangement of its vessels may be clearly seen. The omentum on the other hand may be undergoing inflammatory changes sufficient to destroy its vitality, without showing any marked change of color, its vessels being only marked by a few faintly seen perpendicular lines. It is true that when subjected to violent or protracted inflammation, the omentum shows a decided loss of consistence, but any manipulation sufficient to discover this is dangerous, as slight pressure by the fingers will often convert it into a pulpy mass. Because of its lower power of vital resistance, an inflamed omentum is much more likely to die after being returned within the abdomen than a correspondingly inflamed bowel, and it should be always remembered that when returned in the condition described the mass is likely to act as a foreign body and induce a fatal peritonitis. It is, indeed, not necessary that destructive changes advance to this degree to light up a dangerous inflammation within the abdomen. When there is much hypertrophy, a condition often seen in old hernias, a slight inflammation may readily pass into a destructive one, because of its low vitality, and this danger is increased, for the reason that the size of the misplaced tissue makes necessary for its

reduction a good deal of rough manipulation. Aside from the danger of inflammation there is the objection to returning a large mass of omentum that the opening in the abdominal wall through which it has protruded must be so much enlarged as to greatly favor the protrusion of some portion of the contents of the abdomen at a future time.

When adhesions exist between the omentum and the hernial sac, the objections already mentioned to a return of the former apply, and there is the additional one, that when the adhesions are of long standing, their breaking up causes the rupture of numerous small vessels which may not bleed while under the eye of the operator, yet do so after the replacement within the abdomen has been effected. This blood in the cavity outside the vessels, even when small in quantity, becomes an element of extreme danger, as is shown by actual experience in herniotomy and oftener in ovariectomy.

These dangers attending reduction of the omentum are generally recognized by the profession, and surgeons are usually agreed that only when it is small in quantity, healthy in character, and apparently recently protruded, should it be returned, but as to the other methods of dealing with it there is not complete unanimity. Some surgeons advise that it be left in the sac, and others that it be removed. My own experience has led me to the conclusion that it is safer not to return it in any case. In two of my cases of inguinal hernia in which strangulation had recently occurred, and apparently in all respects favorable for an operation, the sac was found to contain both omentum and intestine. The former being small in amount and only slightly congested, was returned after the reduction of the latter. At the time of the operation there was no evidence of abdominal inflammation, yet a fatal peritonitis was developed, one patient died in thirty-six hours after the operation and the other in fifty hours. In both cases a post mortem examination revealed the usual signs of a general peritonitis, yet the intestine had so completely recovered, the portion that had been strangulated could not be recognized. A portion of the omentum was in one case gangrenous, in the other, highly congested and softened. It was easy to decide that the portion of omentum returned was the starting point of the peritoneal inflammation in both instances. A study of these cases has satisfied me that in others where death followed an operation the unsuccessful result was owing to the same cause. In another fatal case—not my own—in which the omentum had been returned after the separation of adhesions existing between it and the sac, I found on opening the abdomen after death that considerable hemorrhage had taken place from the portion of omentum that had been in the sac. The blood was in a state of decomposition, and the other conditions present made it apparent that it originated the series of changes that had ended in death.

The fact that occasional recovery follows the return of a large mass of omentum that has been subjected to rough treatment in separating adhesions and forcing it into the abdomen through a small opening does not invalidate the rule I am seeking to establish.

In every case in which I have returned a large mass of omentum peritonitis has been developed. The following cases are examples.

I H, American, R R clerk, 24 years old, applied to me for an operation on an irreducible inguinal hernia. I shall give only a mere outline of the case. Four years ago he was struck by a falling box on the right inguinal region. Pain and swelling followed, both at the seat of injury and of the scrotum, the latter never disappeared, and frequently all the symptoms of strangulated hernia appeared, to subside again after one or two days. During the last three or four months the attacks have been so frequent and severe as to prevent him from doing any work. Prominent surgeons in Columbus, Indianapolis and elsewhere have been consulted. While the opinions given in relation to the case varied somewhat, there was a general agreement that an operation would be dangerous, and the surgeons consulted declined to undertake it. The patient had suffered so much, he was willing to incur any risk, if there was a hope of his ultimately obtaining relief. After making a careful study of the case, and corresponding with one of the most prominent surgeons previously consulted, who opposed the operation, I decided to comply with the wishes of the patient. When the operation was made, the injured canal and the scrotum were found filled with a mass of omentum, about six inches in length, and three inches in thickness, at its largest part. Firm adhesions existed between the sac and its contents, while the atrophied testicle and the cord at its lower part were firmly adherent to the omentum. The various adhesions were separated, the testicle and part of the cord removed, and the omentum returned into the abdominal cavity. The last procedure was difficult of execution. A part of the sac was removed, and a fold of the remainder retained in the internal ring, by sutures passing through it and the external borders of the ring, the ends of the wires being passed through the overlying skin and twisted over a small roll of adhesive plaster. Peritonitis followed, seriously threatening the life of the patient. Although perfect recovery, with a radical cure of the hernia, finally resulted, I am satisfied that had I removed the omentum, much less danger would have been incurred.

II F, American, farmer, 48 years of age, had a small left inguinal hernia for six years. During this time he had generally worn a truss. Ten days before consulting me his truss was broken. The hernia descended and could not be returned. Soon the characteristic symptoms of strangulation appeared. A physician failing to accomplish reduction, I was summoned. I found a swelling about three inches in length and one and a half inches in width, extending from opposite the external abdominal ring into the upper part of the scrotum. An anæsthetic was given, and failing to accomplish reduction, I used the knife. The hernia was found to be the direct variety, the sac containing omentum only. The stricture was not tight, the omentum free of adhesions, and only slightly congested. The mass was easily returned into the abdomen, yet within twenty-four hours a dangerous peritonitis was devel-

oped, from which the patient only slowly recovered

The following brief report of two cases unlike in character, fairly present the results of my experience since adopting another mode of practice, and at the same time show what I believe to be the best method of procedure in similar cases

III K, Irishman, 71 years old, after having an irreducible right inguinal hernia for many years, suddenly presented the symptoms of strangulated hernia. He being under the care of a homœopathic doctor, practically nothing was done to afford relief during five days. At this late period I was sent for. I found the patient in a state of collapse, but as the patient and his friends urgently demanded an operation, I used the knife. The hernial tumor was unusually large, and contained a loop of small intestine three inches in length, and a mass of hypertrophied omentum at least four inches in diameter. Adhesions were found between the intestine and the omentum, and between the latter and the sac. These were taken up, the stricture divided, and the intestine returned into the abdomen. The omentum was transfixed by a wire suture, just outside of the internal ring. The wire also passed through the borders of the ring. The ends were twisted together and cut off short. A strong double silk ligature was passed through the omentum just below the suture, and each half strongly tied. The omental mass below and most of the sac were then cut off, and the wound partly closed. After the operation the patient soon rallied, but little suppuration followed, the ligatures separated in fifteen days, not a single unfavorable symptom appeared, and rapid recovery followed. A radical cure of the hernia was effected, as during the three years since the operation it has not reappeared. The wire suture remains in the tissues.

IV S, German, 54 years old, had double inguinal hernia for 47 years, and wore a double truss during the last sixteen years. Owing to some defect in the truss the right hernia protruded in June last and could not be reduced. Some pain in the tumor followed. The physician who was summoned thought he twice reduced a part of the tumor. In this he was probably mistaken. I first saw the patient ten days after the accident. The pain and swelling had not abated, and I found the tumor extending from the internal abdominal ring to the lower part of the scrotum, being about eight inches in length and three inches in diameter at its thickest part. The tumor being hot, tender and painful with an absence of obstruction of the bowels and of threatening constitutional symptoms, I counseled delay and the use of hot applications to the swelling. Eleven days later I again saw the patient. The symptoms had gradually grown worse. The tumor was larger and more tender, and the vital forces generally failing. Assisted by Drs. Sutzl, Duggins and Bond I operated without longer delay. An incision about eight inches long was made into the tumor. A considerable quantity of pus was found, and a large mass of omentum adherent to the sac and in a state of inflammation. The testicle was found in the lower part of tumor, the tunica vaginalis containing considerable fluid. This was freely divided to secure a radical cure of the hydro-

cele. The omentum was separated from the sac after much trouble, fixed in the internal ring by a wire suture, ligated and divided as in the preceding case. A large part of the sac was also cut away. The upper part of the wound was closed by sutures, and carbolized water dressing applied. But little pain followed the operation, anodynes being at no time required. The general condition of the patient rapidly improved. Free suppuration occurred, but no trouble within the abdomen. The wound was daily syringed with water containing carbolic acid. The patient was able to sit up in two weeks. The ligatures separated on the sixteenth day, and the wound was entirely healed at the end of four weeks.

Other successful cases in which omentum was removed might be reported, but these are sufficient to contrast the results following the removal of the omentum with those following its return into the abdomen. I have had this experience. In no case in which I have cut away omentum with or without a portion of the sac has either peritonitis or a fatal result taken place, of course this experience is largely the result of accident, as various conditions independent of our method of dealing with the omentum, may cause either peritonitis or death, but an examination of the subject and my experience has convinced me of the correctness of the rule previously given.

Some surgeons advise leaving the omentum in the sac, but this method has disadvantages. The fat becomes inflamed, suppurates and sometimes sloughs, all of which delay the healing of the wound. If it contracts a tumor is left at the abdominal aperture after the wound has healed that may interfere with the application of a truss in the event of a reappearance of the hernia. The adhesions to the sac said to sometimes render necessary leaving the omentum, can be with a little care safely separated, whether recent or chronic.

It has been recommended that the omentum be cut off and after the separate ligation of each vessel, the stump returned into the peritoneal cavity, but this method is dangerous, as cases have occurred after every precaution was taken to secure the blood vessels, in which a fatal hemorrhage has taken place. An additional argument against this plan is, it takes away the best security against a reappearance of the hernia. When the omental stump is retained in the upper part of the inguinal canal by sutures of silver wire passing through it and the borders of the ring as I have described, a radical cure is almost sure to follow, for as a general rule I have found the sutures to remain permanent without causing irritation.

Some surgeons have assumed that various dangers attend tying a ligature around the omentum. It has been, however, demonstrated by experiment in St. George's Hospital and elsewhere, these are purely imaginary. We are informed by Mr. Holmes that in the hospital mentioned, "In no single instance has any untoward symptom been excited by the ligature of the omentum."

Some surgeons, like Mr. Erickson, give instructions for securing the free ends of the ligature to prevent the omental stump slipping into the abdomen,

an accident almost certainly fatal By my method such an unfortunate occurrence is rendered impossible It offers an additional important advantage, the permanent suture generally secures a union between the stump and the borders of the ring by which the latter is effectually plugged, and a radical cure of the hernia effected

RICHMOND, IND

REPORT OF THE COMMITTEE ON MEDICINE OF THE
KANSAS MEDICAL SOCIETY FOR 1882-83,
READ AT THE MEETING IN TO-
PEKA, MAY 15, 1883

BY W L SCHENCK, M D

[Published in advance of the Transactions of the Society.]

Your committee are not aware of any special progress in medicine during the year that has just closed, though the labors of many eminent men of the profession have doubtless resulted in healthful growth

Philosophers entertain different views of growth One school believes in a continuous development resulting from natural and fixed laws, another that all great, time-enduring monuments are the result of special inspiration

Spencer says God in Nature, before all things, in all things, bringing forth by immutable law order, progress, growth

Carlyle beheld Him above Nature, inspiring anew the human soul, and thus promoting progress

To the one the event made the man, to the other, man the event Both are in a measure correct

The perception of truth, the conception of a great event, by an earnest soul gives the seeming supernatural power that enables one man to move millions—to roll the ages Great truths lie hidden all around us, while the laws that move and develop the worlds, from the mightiest sun to the minutest molecule, from the spiritual life of man created in the image of God to the microzone, are fixed and immutable God inspires whoever devotes the energies of his soul to the comprehension and demonstration of these laws, and inspires anew every soul that with living faith enters into intimate communion with Him, whether as He reveals himself in the material world or in the spiritual life Hippocrates, Galileo, Newton, Bacon, Franklin, Morse, Milton, Shakespeare drank new, fresh draughts at the fount of inspiration

Moses, with a lofty conception of spiritual truth, wrote the commandments, which are yea and amen

Mohammed, profoundly impressed that "Allah is God and Mahomet His prophet," obtained over the inconstant bandits of the desert the power "of wielding, molding, gathering, widening, banding the hearts of thousands till they beat as one" Men prove themselves by their earnest devotion to truth as they perceive it The ultimate influence of inspiration varies with the field occupied The influence of the inventor and discoverer, though wide as the world effects no world-wide changes in humanity The physician is more inventor and discoverer than philosopher Yet his whole life is a philanthropy, and as he unfolds more and more the laws of life and

death, the relations of the spiritual to the physical, of mind to matter, he becomes more and more a philosopher, and here is a wide and fruitful opening for his labors As we have not yet learned what either mind or matter are, we know not how they are united or the extent of their influence upon each other Spiritual medicine is yet in its infancy Scientific men have recently been giving more careful thought to this department of science, and it has suffered a great loss during the year in the death of our fellow countryman, Dr George M Beard, of New York

We may deny the resurrection of the body because we believe it intrinsically incredible, but does not its incredibility rest simply upon the fact that it is exceptional? Unless we assume that nothing can occur that has not occurred, can it on that account be maintained as absolutely incredible? Must it not be shown impossible in the nature of things? This we cannot do, for we know too little of the nature of the things concerned—life, matter, and the link that binds them in one The many well-attested instances of the going out of the spirit from the body, as under the influence of trance and clairvoyance, are about as intrinsically incredible as the resurrection of the Master, because they are beyond all we yet know of the laws that govern the connection of the mind with matter In a sermon preached in Philadelphia, Easter Sunday, 1883, by Rev Dr Furness, he says "The appearance of Christ after death being admitted, the common assumption that death is the utter extinction of life, is not merely negatived, but we see a little way into the mystery We discover that the life that animated the body can, under certain conditions, resume its power over the physical frame What those conditions are, the whole history of Jesus, his life, death, and emphatically his resurrection, reveal All show there was in him an unprecedented quantity of being, a fullness of life—the life of faith in God, the life of love, which is the very essence of the Almighty One So profound was his interest in the truth for which he had voluntarily surrendered his mortal existence, so strong was his affection for his poor bewildered disciples, that he must needs reappear to them to reanimate their faith and reassure them of his undying interest in them And so, as one awakes early in the morning when some great thing is to be done, Jesus awoke from the deeper slumber of death The resurrection of Jesus teaches us that life is a thing of degrees As is our faith and love, so is the depth, the quantity of our being"¹

Intrinsic incredibility would deny the miracles wrought by Christ, and yet they were in harmony with all we know of the influence of mind upon matter, of the spirit upon the body

There may be those within, as well as without the profession, who will raise their hands when we seek to investigate the power by which the Christ wrought his "miracles," but we belong to that branch of the medical profession that circumscribes itself with no iron-bound creed, that accepts the whole pharmaco-

¹ The thanks of the committee are due to the sermon of Dr Furness for several suggestions in this report

pæia of nature and art, whether spiritual or physical, whether moral or mental, animal, vegetable or mineral, as the beneficence of omniscience, and seeks to discover the possibilities of all. What progress can we expect from those who stand aghast at the investigation of any truth, or who denounce as always injurious any mode of depletion or repletion unless it acts specifically or in accord with some preconceived idea, and who thus withdraw from affiliation with those who adopt a broader faith and seek a wider field of knowledge? We are ready to investigate anything and to prescribe anything in any dose. All we ask is to know that it benefits, and to know, if possible, why and how. The true scientist does not attempt to circumscribe, but to comprehend, the wisdom and power of Omniscience and Omnipotence. The wise physician will not proclaim in advance any inexorable law of *aha alius similia similibus* of specifics or dynamizations and thus deny himself association with men of larger views and opportunity of garnering from broader fields. Science never advances on such a basis. The father of medicine as a science, laid down a broader platform. Among his aphorisms we find "some diseases are cured by contraries, some by similars." And the famous saying of Corus in his controversy with Hahnemann applies equally well to all narrow sects in medicine. "Whatever is new in homœopathy is not true, and whatever is true is not new." No narrow and exclusive dogma ever developed such men as Hippocrates, Harvey, the Hunters, Jenner, Loanec, Bechat, Boerhaave, Cullen, Magruder, and a host of others who have made valuable additions to the science of medicine.

Though we do not yet comprehend either life or death, or the link that binds in one soul and body, the broad and earnest search after truth enables us to know much that was once inscrutable, and bids us push forward with the full assurance that we shall yet penetrate the secret of life, the power of the spirit over the body and their bond of union. Need we longer resort to the theory of miracles, as commonly understood,—the interruption of laws already existing or the creation of special laws for the occasion,—to explain the well attested cures of the Great Physician? or do we detract from his glory when we concede a wisdom that comprehended and co-operated with the great central laws of nature—the power of spirit over matter? He claimed for them no supernatural power, but rather that they were in harmony with the laws of spiritual and physical life. When his disciples failed to effect similar cures his expression was, "Oh, ye of little faith!" His thought seems to have been "all things are possible to him that believes." In faith he saw a sovereign power working in and through man in unison with eternal law. Through its power the insane were cured, the dumb spake, and the lame walked. The spirit of man is but a scintillation from the Infinite. Who shall limit its power to energize brain and nerve and through them vitalize the whole body?

The Master seemed himself surprised at his wonderful cures, but, profiting by experience, his faith in faith daily increased. Avoiding all undue publicity, steadfastly adhering to his one great thought, he used

his power over the body only to win men to the theology he proclaimed. "Except ye see signs and wonders ye will not believe." Many are wont to consider his faith-cures exceptional. But like cures have occasionally been wrought all down the ages. The history of the Papal Church is full of them. Sixty years ago Ramohun Roy translated the "Precepts of Jesus." He omitted his miracles, because, as he said, "they are much less wonderful than those handed down to the people of Asia." Christ fully recognized in faith a curative force open to all, and hence said to his disciples, "The works that I do ye shall do also, and greater works than these." Though thus clearly taught eighteen hundred years ago, it is as yet but feebly apprehended, though we have all observed or known cases where a mental impression killed or made alive. Dr. Chambers, in his work on "The Indigestions," gives the following case: "Rev. N. R., a bachelor of middle age, * * *. In November he came to me again, saying that when he dined in company he could digest anything, and never suffered, however rash he had been at table, but when he took his meals alone for several days together, his old symptoms of the previous year returned, and no carefulness or abstemiousness prevented them."

Here an unappreciated action of the mind, which through sociability unlocked, or through mental abstraction locked up the energies of the brain, prevented or produced painful digestion.

Dr. Nathan Smith, the founder of Dartmouth Medical College, gave the following case from his practice. He was called up the Connecticut to see a patient who had long been pronounced a hopeless paralytic. A careful examination failed to reveal any lesion. He directed the patient—a maiden lady—to be placed at a given time in a certain relation to the bed and the door, so that upon opening the door she should be fully exposed, and stripped for a shower bath. At the moment the doctor opened the door, when the patient sprang into bed and covered her nakedness.

Here we have an instance of the power of the will over the body, paralyzing its muscles or stimulating them to activity. All have doubtless heard of the Chicago faith doctor who a few years ago hired a suite of rooms, flooded the papers with his advertisements, paid a reporter to make daily reports of the number who hobbled up his front stairs and went rejoicing down the back way, and the number of cranes and crutches deposited in the back-yard. N. B., who had been confined to his bed under the care of a prominent Chicago physician for several weeks, read the reports and told his physician he decided to try him. He was sent for and after such delay as would increase the anxiety of the patient visited him. Looking quietly at the patient he bade him sit up, get up, draw on his pants, walk, run, pull on his boots, go down stairs and back. He was promptly obeyed by the astonished patient, even to the command "pay me fifty dollars." When the doctor had gone he sat down to think, to wonder, to doubt and soon to find himself as helpless as ever.

Here faith cured, but a doubt produced relapse.

Why repeat cases? The world is full of people staggering to the grave with every variety of disease engendered by anxious care, and full of cures wrought through the mind. Every physician knows the difference in the curative power of his prescriptions when his patient is animated by faith and when faith halts, perchance through the influence of some meddlesome neighbor, perchance the runner of some nefarious doctor. Every physician has found patients who refused to confirm his prognosis, living when they should die, or dying when they should live. In the one class the will, through faith, energizing the brain until a nervous force was generated that imparted power to remove the causes of disease and repair wasted tissue, in the other through lack of faith there was no removal of disease poison, no renewal of wasted tissues, no life. How other than through the force of faith can we explain cures wrought under the dynamizations of Hahnemann, or by the egotistic quack whose patient often recovers despite his treatment? How also explain the cures by prayer divines record? It is not because the Infinite has stopped to rectify mistakes, but "Faith springs exultant on triumphant wing," energizing brain and heart, absorbent and exultant until gaunt disease gives place to rosy health. And why should not faith cure? We cannot conceive of any physiological action not under the direction of the nervous system. It supplies the energy that causes the salivary, gastric and intestinal glands to secrete digestive fluids, the force that enables the muscles to masticate and move the food, that endues the absorbents with power to take up and carry the chyle into the circulation, that energizes the heart and circulatory vessels to distribute it to the body, that endues the glands with elective power and enables them to remove morbid material. That

to this subject, the battle was being fiercely fought between the supporters of the germ theory of putrefaction and the defenders of the older doctrines, but the question has now been settled in favor of the new theory, and you know that since then many other diseases have been found to have their cause in the presence of certain germs. So that now it is a generally accepted fact that putrefaction is due to the presence of bacteria life in the tissue, and also that if you destroy the bacteria life you will put a stop to the putrefactive change. The three best antiseptics are first, carbolic acid, second, iodoform, third, corrosive sublimate. In using carbolic acid it is found that one part in twenty of water is the safest to arrest bacteria life.

The theory is settled by its being generally accepted that septic disease is due to bacteria life, and if you destroy the bacteria life you arrest the disease, a 5 per cent solution of carbolic acid being the "safest to arrest bacteria life." Is a theory in science settled by general acceptance? Becomes apparently true, the movement of the sun around the earth was once generally accepted. Hang out a piece of meat on a warm day and it is soon filled with the larvæ of the green fly. Dip it in a 5 per cent solution of carbolic acid and you destroy the larvæ and arrest septic change. Does it follow as a logical, scientific deduction that the septic change is due to the larvæ, or its arrest to their destruction? Exposed wounds fill with bacteria life and have been known to fill with the above named larvæ, by applying carbolic acid you destroy the life that feed upon putrefaction and at the same time arrest it. Do you thereby prove the life caused the putrefaction or its death caused its arrest? Certainly not, if it is to arrest disease by internal administration, and that

Special forms of micrococci may increase in each specific decomposition, finding there their chosen food, and hence may prove valuable aids in both diagnosis and prognosis, and we may find the aseptic agent also a germicide, but we must distinguish in diagnosis and treatment between the *post hoc* and *propter hoc*

Dr Geo M Sternberg, Surg U S A (*American Journal Med Science*, April, 1883), has, by elaborate and definite experiments, shown the exact strength of the various antiseptics necessary to destroy bacteria life "Mercuric Bichloride The value of this potent agent as a parasiticide for external use is well established * * * The proportion in which it prevents the development of septic micrococci is 0.0025, or one part in 40,000 * * * The quantity required to prevent their development in a man weighing 160 pounds would be $3\frac{1}{2}$ grains"

A full dose of the agent is from $\frac{1}{4}$ to $\frac{1}{12}$ of a grain "In iodoform we have an agent which permits the introduction of iodine into the system in larger doses than is tolerated when the agent is given uncombined in the form of tincture or in solution with potassium iodide And we have evidence that this substance is not eliminated so readily as the potassium salt, and that it is decomposed within the body, still it does not seem practicable to administer it in sufficient quantities to take advantage of the germicide power of iodine for the destruction of pathogenic bacteria in the blood and tissues

"Bacteric organisms failed to multiply after being exposed to a one per cent solution of carbolic acid * * * The experimental data recorded do not favor the idea that in this agent we have a cure for all germ diseases The quantity which should be present in the blood of our standard adult, to accomplish the desired purpose would be considerably above an ounce of pure acid"

Dr Sternberg, despite his proof that the quantity of an antiseptic possible to be taken by a patient without destroying life, is insufficient to even prevent germ accumulation adopts the germ theory and germicide treatment of disease, and Dr Wier, who believes carbolic acid the "safest" agent for the destruction of the bacteria, and deems a five per cent solution necessary for that purpose, declares the germ theory settled

There is so much averse to its settlement that it seems to us many distinguished investigators have placed themselves rather in the position of advocates than scientists We would call the attention of the society to the many cases of poisoning reported in the journals by iodoform and other germicides, and recommend the members to avoid putting the theory to a practical test with their patients Physicians may adopt it while it is the fashion, but we cannot avoid the prognosis that the fashion will change Bacteria are found in the body under all circumstances, and with favorable conditions of food, moisture and warmth, like all other living organisms, they multiply They may be carriers of the disease ferment with which they are covered and on which they feed, and thus communicate disease They carry it as does the unwashed doctor who goes from his sep-

ticæmic patient to the lying-in room, and are proved its cause much as we would prove the doctor the cause of puerperal fever by purifying him with a half scruple dose of mercuric bichloride or five ounces of pure carbolic acid, thus saving his patron from disease and death

The physician of the future will learn to distinguish between the carrier and the cause of disease as well as between the germicide and antiseptic action of medicines

BI-CHLORIDE OF MERCURY IN DIPHTHERIA

BY MADISON REECE, M D, ABINGDON, ILL

During the past two and a half years I have used, exclusively, in the treatment of diphtheria, the bichloride of mercury in large and frequent doses My attention was called to its use by reading the address of Dr Wm Pepper, chairman of the Section of Practical Medicine, before the American Medical Association for the year 1881 The statements therein made interested me to such an extent that, having on hand two cases of this disease of a malignant form, I determined to try its efficacy

Up to this time I had found (as who has not?) true diphtheria one of the most fatal forms of disease that could be encountered I had used the usual remedies, so far as I could observe without any effect upon the progress of the disease, and had arrived at the conclusion that in the worst forms of the disease the patient would die with or without treatment, but since adopting the method of treatment to be described, I have not felt the same anxiety as formerly, when called to a case

To this date thirty five cases have been treated in this way, with three deaths Two of these deaths were the first cases referred to above, and although they ended fatally, I was thoroughly convinced that the remedy had special power to combat the disease, and I now believe that with my present experience in the use of this remedy, I could have saved one, if not both of these patients

My method of preparing this medicine is to dissolve one grain of the bi-chloride in four ounces of rain-water, then, if the patient is old enough to gargle and rinse the throat and mouth, he is to do so every two hours, and immediately afterwards to take a teaspoonful internally If the disease be of a severe form, it should be administered in this way every hour The above dose is calculated for a child of five years of age I have often used the same amount for a child of two years of age

It will be observed within fifteen or twenty hours that the exudations on the tonsils and palate will begin to fade away and in a few hours more rapidly disappear If then, unfortunately, as I found by experience in my early use of the remedy, the medicine be discontinued, the exudation will rapidly reappear, to be again dispersed by a return to the treatment, so that it is necessary to continue for a week, or even a longer time, the use of the medicine, not in such large and frequent doses, for it is observed that as soon as the patient shows signs of becoming bet-

ter, the effects of the bi-chloride are shown by nausea, or vomiting, or purging. But so long as the system seems to be laboring under the diphtheritic poison, these effects are not manifested.

I shall not attempt to give the *rationale* of the action of this medicine, but will only call attention to the fact that it belongs to that class of remedies which is rich in chlorine, and to which physicians have resorted for many years in the treatment of this affection, such as the tr of the chloride of iron, chlorine water, chlorate of potassium, and here the bi chloride of mercury. Also in view of the strong germicidal qualities of this substance, as recently demonstrated by Dr Sternberg we may reasonably suppose it has a destructive effect on the bacteria that swarm in the exudation in the throat and surrounding structures.

To show that this remedy in diphtheria seems to be appreciated abroad, I quote from Dr Sternberg's article in the April number of the *American Journal of the Medical Sciences*, page 337. "A medical friend who has just returned from Vienna informs me that mercuric bi-chloride is at present the favorite remedy in that city for diphtheria."

My friends and neighbors, Dr H. Judd, of Galesburg, and Dr W. G. Piersol, of Hermon, have used this remedy in their practice with the most satisfactory results.

In conclusion, I would request those who may make a trial of this treatment to communicate the result to the JOURNAL, or if not wishing to do so, to the writer.

AN OCULAR POLYPUS

BY S. POLLAK, M. D., OF ST. LOUIS

A lady of 74 years presented herself with a "bleeding eye." Blood was oozing from beneath the upper lid constantly when the lids were open. The eye was perfectly sound, vision good, except when obscured by the blood. The upper lid was somewhat conical, and of a light bluish tint. On evertng it, the conjunctiva was found perfectly smooth, but on pressure, directly on the superior orbital margin, a racemous, painless tumor was extruded from the sulcus, of the size, shape, and color of a Lawton blackberry, which was bleeding profusely on the lightest touch. It was very brittle and friable, and could have been crushed with ease. It was difficult to determine the nature of it. Was it benign or malignant? Was it an angiectasia, an erectile tumor, or a polypus? I am inclined to think it was the last. Though a very confined space for a polyp to emanate from and to grow, yet the mucous membrane everywhere is the habitat of polypi, and the upper sulcus of the eye is well adapted for its origin, although not for its development. It had to be removed at once, and it was promptly effected. With a curette the edges of the tumor were raised, they were found flattened against the conjunctiva, but not attached to it. A pedicle of about 1 centimeter was reached and readily twisted off with the forceps. Bleeding stopped at once. The levator palpebra superior be-

ing freed from the impediment of the tumor, resumed its function. The result was entirely satisfactory. No recurrence of bleeding. The wound was nearly cicatrized the next day. This polypoid tumor is carefully preserved, and will be accurately examined with the microscope.

MEDICAL PROGRESS

MIDWIFERY AND GYNÆCOLOGY.

A FRAGMENT OF A CANDLESTICK IN THE UTERUS.—Dr E. Hjerstrom reports the case of a working-woman 49 years of age who had been subject to periodical attacks of mania since puberty, with lucid intervals. Although single she is the mother of three children, was under treatment for an abundant and foetid vaginal discharge. Examination of the uterus showed a neck covered with granulations, and irritated by a secretion which came from the uterine cavity, exploration of the uterus with a sound disclosed the presence of a metallic body. The patient would not admit that a foreign body had been introduced into the womb. After dilatation of the cervix, a piece of brass was extracted which had lodged in the superior portion of the uterine cavity. It proved to be a bobèche or socket, the tube of which measured cm 0.15 in length, and 2 centimeters in diameter, and of which the flange reached 4 centimeters in diameter. The patient did not know how the bobèche got there. Her menses had ceased for five years, her last confinement was twelve years previous, she never had any symptoms of parametritis, but had suffered from uterine colic particularly of late. Possibly the piece was detached from a candlestick introduced into the vagina through eroticism, and seized and retained by the uterus during the mechanical excitement.—*Hygieia Rome Medica, Paris Medica*

CURE OF A SEVERE CASE OF HYSTERIA BY CASTRATION.—Dr Bernh. Heilbrun (*Centralblatt für Gynäkologie*, Sept 22) gives us the details of a case of hysteria in a girl 24 years of age, who was bedridden for seven years, suffering from excessive vomiting and cramps in the stomach to that extent as to lead to the diagnosis of ulcer of that organ, these symptoms were relieved sufficiently during her illness to allow of the retention simply of eggs and of milk. Contractions of all of the muscles of the body gradually developed themselves, commencing with the left lower extremity, the slightest movements causing severe muscular cramps. The ovaries were removed and found to be very different in size, the right 1 cm long, $\frac{3}{4}$ cm broad, $\frac{1}{2}$ cm thick, irregularly shaped and of firm consistency, the left $3\frac{1}{2}$ cm long, $1\frac{1}{2}$ cm broad, 1 cm thick, the surface uneven, tuberculated, and filled with a number of cysts the size of a pea. A fresh corpus luteum was noted.

The abdominal wound healed by the first intention. On the 12th day the patient left her bed, four weeks after the operation she could walk alone, and eight days later returned to her home, three months later the menses appeared without pain, but never returned. She now, ten months after the operation, walks from her home to her physician, a distance of $1\frac{1}{2}$ leagues.

HYPODERMIC INJECTIONS OF ERGOTININE IN POST-PARTUM UTERINE HÆMORRHAGE—Dr. C. Chahbazian (*Archives de Tocologie*) recommends this treatment for the following reasons

1st Ergotinine, alkaloid of the ergot of rye, can be employed with success in subcutaneous injections to arrest post-partum uterine hæmorrhage

2nd The hypodermic injections of ergotinine are indicated whenever a post-partum uterine hæmorrhage results from feeble uterine contraction, or uterine relaxation after a short contraction

3rd In the case of post-partum hæmorrhages arising from rupture of the uterus, tearing of the neck of the vagina, from hæmorrhoids or from cliteroid hæmorrhage, ergotinine has no effect

4th Five drops of the solution of ergotinine (of the preparation used by Dr. C. Chahbazian and made by Taurer) is sufficient to arrest hæmorrhage. The dose can be repeated if necessary, but not more than to the amount of fifteen drops, generally small doses of ergotinine act better than large in arresting post-partum hæmorrhage

5th The advantages of ergotinine over ergotine are (a) More prompt action, which is surer and more constant over the uterus, (b) Absence of any local disturbance, as induration, abscess or gangrene, (c) Necessity for but a small dose to obtain a good result

6th Ergotinine may be employed successfully against secondary uterine hæmorrhages, and as a prophylaxis against post-partum hæmorrhages

SCROTAL PRESENTATION DURING LABOR—Dr. A. Prengmeber (*Alger Medical*) describes a case where the presenting part at the vulva was a tumor of the size of the fist, black as jet, bloody, and yielding to palpation. His first idea was of a fibrous tumor or a polypoid attached to the orifice of or within the neck of the uterus, pushed down by the presenting part and pressed against the pubis. In his mind was the feasibility of dividing the pedicle of the tumor by means of a bistoury or by a ligature, but, fortunately, by a further examination he reached the buttock and the anus, and found he had to deal with the scrotum. Delivery was readily effected, the discoloration soon disappeared and the scrotum returned to its normal size

ON THE REMOVAL OF THE PLACENTA—Prof. Dohm (*Deutsche Med. Wochenschrift*) gives the results of his observations in the Königsberg Hospital, especially with regard to Crede's method, as follows

1 In 1,000 cases of labor where the removal of the placenta was left to nature, the results were far better than in 1,000 other cases where Crede's method was employed

2 The 1,000 cases of labor where the placenta was discharged spontaneously had markedly less hæmorrhage, retention of membranes and puerperal fever. Those that were treated according to Crede's method suffered to a considerable extent from troubles with the membranes, and in consequence there were many fatal puerperal affections

3 Those cases where the placenta was removed in the first five minutes after birth by the Crede

method, were the most liable to these affections. Those that were left longer before such extraction was attempted did better, but still remained considerably in excess of those where this was left to nature

MEDICINE

THE USE OF ANTIMONY IN CERTAIN SKIN DISEASES—Mr. Malcolm Morris, F.R.C.S. ED., Surgeon to the Skin Department of St. Mary's Hospital, writes

Considering the close chemical affinity of the three important drugs—phosphorus, arsenic and antimony—it is somewhat surprising that little use should be made of the last in the treatment of diseases of the skin. Of the three, arsenic is the one which has gained the greatest notoriety. It has passed alternately through the phases of great popularity—being considered by some a specific for every form of skin affection—and of equally undeserved disrepute. Now, however, we are forming a more rational estimate of its value, and, while acknowledging its utility in a few certain well-defined conditions, I have thought it might prove useful to bring before this Section some of the results observed during the administration of its nearly

A certain share of attention has also been paid to phosphorus, but antimony has hardly been noticed. The probable reason for this is that antimony has been looked upon as a drug to be avoided on account of the dangerous symptoms produced by even apparently moderate doses. But the same argument that applies to arsenic, and strychnia and other drugs, applies with equal force to antimony—that the action depends entirely on the dose employed. We find in text-books that it has two actions—in the smaller pharmacopœial dose depressant or antiphlogistic, in the larger dose emetic. But no mention is made of its alternative action in repeated small doses. The sulphide, in combination with mercury and guaiacum, is the only preparation which has been used for this purpose.

Tartar emetic, or tartarated antimony, is the preparation I have used in these investigations, the largest dose being $\frac{1}{32}$ of a grain or seven and one-half minims of the vinum, only half of the minimum dose of the *British Pharmacopœia*. I must mention that in all cases in which the effect of the drug has been watched little or no local treatment has been used.

I will state now, in as concise a manner as possible, some of the more important diseases in which I have used the drug, leaving a more complete and detailed account for another opportunity.

Eczema—It is now several years since my colleague, Dr. Cheadle, pointed out to me the value of antimony in the treatment of the acute form of this disease. In the majority of the cases which have come under my care its beneficial effect has been both marked and rapid. In the acute general eczema of adults, which usually commences somewhat suddenly by heat and burning on the flexor surfaces, and on the other characteristic positions, and is soon followed by abundant exudation of clear fluid, and in the form known as eczema rubrum, I generally begin

with four or five minims of the vinum antimoniale three times a day, increasing the dose gradually up to seven minims. After a few doses the exudation ceases, and the local irritation is much relieved, but, in order to prevent a relapse, it is necessary to continue the treatment until all traces of the eruption have disappeared. In acute eczema of children, the dose should be in proportion to the age of the child—half a minim or less up to six months, and one minim or less up to a year. As a rule, I have found both children and adults bear these quantities well, neither sickness nor diarrhoea being produced. In the case of aged persons, however, the dose should not exceed three or four minims to begin with, as diarrhoea may result from the administration of a greater amount.

In the subacute forms, both of children and adults, similar doses, but continued for a longer period, are necessary. In chronic eczema, especially when localized, the use of antimony is less often successful, but even in this troublesome form, it relieves the acute exacerbations, and is occasionally followed by cure when other methods of treatment have failed.

In eczema impetiginodes of children, I have noticed little benefit from the drug till the scabs have been removed, and formation of pus checked by local treatment. Simple impetigo contagiosa from a local cause is not included in this category.

In the various forms of so called lichen that occur in children, I have found antimony in the previously mentioned doses of the greatest value in relieving the irritation—a feature in which it resembles arsenic.

Erythema—In most of the cases of erythema met with in practice, the eruption disappears without any special treatment, occasionally, however, when the disease is continued by fresh outbursts, antimony is of great service in modifying the course and relieving the burning and heat. There is a condition which is not clearly described either in special books on the skin or in those on general medicine, that I have found to be greatly benefited by antimony, whereas it is aggravated by arsenic. The attack usually commences suddenly, with heat and burning of the skin of the face, which is followed very rapidly by great swelling that often involves the eyelids. The smarting is severe, and pain is experienced when the part is touched. Occasionally vesicles or bullæ are formed on the swollen and inflamed skin. The patient feels ill, but there is no special rise of temperature. The disease usually runs its course in from three or four to ten or even twenty days. The chief feature of the disease is that it is almost certain to relapse. By some authorities this is considered to be idiopathic erysipelas—the public always call it so, but others it is looked upon as a peculiar form of eczema, and said to be associated with gout. I have seen several cases, and am inclined to think it may be called relapsing erythema, as it has none of the dangerous qualities of genuine erysipelas. Antimony acts in this disease as in acute eczema, by shortening the attack and diminishing the severity of the symptoms. It should be continued for a considerable time after recovery, to prevent, if possible, a relapse.

Prurigo—In this troublesome affection, frequently met with in our out-patient rooms—the relation of which to the severe form known on the Continent as Hebra's prurigo, Mr Morrill Baker pointed out at the International Congress of 1881—antimony is of great use. Three or four minims of the vinum, continued over a long period, allays the itching to a large extent, and often prevents the relapses of eczema. In several cases, after arsenic, iron, iodide of iron, cod liver oil, and numberless other tonics had been tried, antimony was the only drug that produced any benefit whatever. When given in the before mentioned doses continuously for more than a year, I have never seen sickness, diarrhoea, sweating, or debility, but, on the contrary, the appetite improves and the weight increases. I have not had the opportunity of trying the remedy in a patient older than 18½ years, suffering from this disease, but in one particular case of that age the benefit was most marked while the drug was being taken.

Sycosis—I have given antimony in five well marked cases of this disease, in four, it did not seem to produce any effect, either beneficial or otherwise, in the fifth, there was considerable improvement after the vinum had been taken a fortnight in seven-minim doses. It seemed to relieve the pain and burning, but, although the remedy was persevered with for over three months, the improvement was only temporary. The local treatment while the drug was being administered was olive oil or vaseline. In none of these cases was there any bad effect, no depression, diarrhoea, sickness, or sweating.

Urticaria—In a few cases of chronic urticaria, I have found antimony, like arsenic, of service in checking attacks, so long as the remedy was continued.

Psoiasis—Though, in the majority of cases of psoriasis, arsenic is to be preferred to antimony, have elsewhere called attention to the fact that, in certain persons, arsenic not only fails to relieve, but even aggravates the disease. I have in some of these cases, tried antimony, and have noticed that in a few instances improvement took place, while in others it seemed to have no effect.

I have been obliged to condense the facts in this paper into very brief space, but two points I wish especially to lay stress on, first, that tartar emetic—in doses of $\frac{1}{10}$ to $\frac{1}{2}$ of a grain, according to age—can not only be tolerated, but seems to have a decided tonic action, secondly, that it proves useful in those acute forms of skin disease that are usually aggravated by arsenic.—*British Medical Journal*

PAINTING WITH TINCTURE OF IODINE IN VARIOLA—In 1881, a patient entered the hospital of Konotop suffering from lumbar pains, and other symptoms indicative of the onset of variola. To satisfy the patient, Dr Vetroff painted all of the lumbar region with tincture of iodine. The next day, this region was entirely covered by a variolous eruption, while only two vesicles were found on the rest of the body. The progress of the disease was very benign.

Having observed this curious case, Dr Bojinski-Bojko (*Pratchi*, No 1, 1883), during the development

of an epidemic of variola in his district, commenced to paint with the tincture of iodine the anterior surface of the thighs of all the patients who presented the precursory symptoms of that disease. In the four cases so treated, the eruption confined itself strictly to the painted limits, and the prognosis was very favorable. Attempts failed to substitute sinapisms for the tincture of iodine.—*La France Médicale*

ANATOMY AND PHYSIOLOGY.

INJECTIONS INTO THE OPTIC NERVE—Pflüger (Soc d'Ophth d'Heidelberg) had injected in dogs two or three drops of a saturated solution of fluoresceine, directing it toward the center, partly in the trunk of the nerve under the arachnoid, and partly into the sheath under the dura mater. In about two minutes, both eyes showed a fluorescence of the retina, which persisted for five weeks. This effect cannot be produced by introducing the fluid directly, it cannot be made to pass through the circulation, and requires at least 8 grammes to produce the result. A small quantity injected into the orbital cellular tissue gave no result. This proves that there is a direct communication between the two retinæ by the course of the optic nerve and of the chiasm, a fact confirmed by the experiments of Knies and Horner, who have in the same manner injected Prussian blue in cadavers, obtaining a coloration of the optic nerves of both eyes.—*La France Médicale*

PANIFICATION—In a carefully written article, which details the changes undergone during the fermentation in the process of bread-making, Mr M G Chicandard (*Monteur Scientifique*) arrives at the following remarkable conclusions

1st Bread fermentation does not consist in a hydration of starch followed by alcoholic fermentation

2nd It is not determined by a *saccharomyces*

3rd The fermentable matter is the gluten

The gluten is rendered soluble by the secretion of a zymase from a microbe, then the hydrate produces a peptone. The microbe assimilates the peptone, and furnishes a number of the products of excretion—carbonic acid, hydrogen, azote, alcohol, acetic acid, butyric acid, lactic acid, leucine, tyrosine, and phenol

4th The crude starch is not modified either by the microbe or its zymase, the preparation simply forms from the soluble starch, the erythro dextrines, and the achroo dextrines, these dextrines being found especially in the most heated portions

5th The agent of bread fermentation exists normally in the grain of wheat, under the form of a mobile spherobacteria, the *microzyma glutinis*. It develops into the *bacillus glutinis*, which is accelerated by the soluble albuminoid matters contained in bakers' yeast

6th Bread fermentation, as described, is produced whenever leaven or yeast is added to flour and water. Any other addition may produce a secondary fermentation, explained by the first, but in the mixture produced we can always find those referred to as belonging to normal fermentation

PHYSIOLOGICAL ACTION OF IODOFORM—Dr Gaetano Rummo (*Archives de Physiologie*) has just completed (October) the second of a series of experimental researches upon this subject in Vulpian's laboratory for experimental and comparative pathology. He finds

1st The mortal dose of iodoform is. For frogs, 2 centigrammes, for guinea pigs, by the stomach or peritoneal injection in from 2 to 3 days, 1 grm 50, to 2 grammes, for rabbits weighing 200 to 2300 grammes, 2 grm 50 to 2 grm 75 in 2 or 3 days, for dogs of the weight of 10 kilogrammes, 4 grammes in 2 or 3 days

2nd In frogs, the contractions of the ventricles of the heart diminish in number, and tend to an arrest in diastole. The systole increases in energy, is regular and ample. These heart movements always precede other functional troubles. The tracings indicate an increase in length of the ventricular systole, and a degree of persistence in the diastolic contraction that is suggestive of veratrine. Atropine does not modify the slowing of the heart. When under the full force of this influence, if the heart be removed from the body, it resumes its frequent pulsations, without reaching the number of pulsations as in the normal state. Iodoform has no action on the heart of the frog when the medulla has been destroyed. In the beginning of the absorption of iodoform, it produces a dilatation of the interdigital membrane, to which succeeds a progressive contraction. In small doses the action of the heart is modified, but the movements remain nearly normal. In large doses there is first an acceleration, then a retardation, and finally an arrest of respiration. In the mammalia there is also a diminution of the cardiac pulsations. In the dog 0.30 grm, or 1 gramme, produces a retardation of the movements of the heart, and a slight increase in arterial tension, without diminution of energy, and without irregularities of the ventricular contractions. With 2 grammes, 4 grammes and more, there comes a progressive diminution in the number of pulsations of the heart, with a lowering of the intra-carotid pressure of about 10 centimeters of mercury. In about four to five hours a gradual return of the tension to its normal state is noted, a return which is followed by an increase of the pressure. In large doses, after retardation of the cardiac pulsations, there is acceleration and irregularity. And the augmentation and irregularity of the respiratory movements, the periods of acceleration and retardation of the cardiac pulsations, the elevation and lowering of pressure, correspond to convulsive movements. These phenomena are not all noticed after division of the pneumogastrics

3rd In the dog, doses of 1 gramme to 1 grm 50 do not influence thermogenesis. Doses of 2 to 3 grammes raise the temperature 1° to 1.5°. Doses of 4 to 5 grammes lower the temperature 4° to 5°

4th Iodoform acts directly upon the nervous centers, and secondarily upon the nerve trunks and upon the muscles. In the first period it exercises a depressing influence upon the anatomical elements of the nerve centers. At first it produces a diminution, which soon becomes complete, of voluntary motion

At the same time there is a slight amount of anæsthesia, and a diminution of reflex action. Later it produces an enfeeblement of the excitability of the nerves and of muscular contractility. In the second period it exaggerates, like a physical excitant, the irritability of the nervous centers, and produces contractions and tonic convulsions.

5th In the dog, doses of 1 gramme to 1 grm. 50 produce no appreciable gastro-intestinal disturbance. The doses of 2 to 3 grammes cause indigestion, and those of 4 to 5 grammes produce vomiting, disgust for food, diarrhœic and dysenteric stools.

6th Iodoform, from the commencement of its action, increases the secretions particularly the salivary, biliary, and gastro-intestinal.

7th Iodoform, in the state of an alkaline salt (sodium iodide?), is eliminated by all the secretions. It is eliminated in small quantity, without being decomposed, by the respiratory tract. It passes out of the urine in small quantity, in the state of an iodate. The large doses of iodoform produce albuminuria and hæmaturia, they also arrest the elimination of iodine. Iodoform commences to be eliminated as iodine one hour after its ingestion into the stomach. It is promptly eliminated, and can be recognized in the urine three days after being taken into the stomach.

8th The most important alterations produced by iodoform are, fatty degeneration of all the organs, particularly of the liver, glomerulo-nephritis, and acute anterior polyomyelitis.

9th Iodoform is more active in preventing the development of bacteria germs than in arresting the pullulation of bacteria. Sodium iodate and iodoform dissolved in oil of turpentine kill the microbes in full proliferation.

VESSEL INSPECTION

COPY OF AN OFFICIAL REPORT MADE TO THE SURGEON-GENERAL OF MARINE HOSPITAL SERVICE, BY JOHN B. OLIVER, M.D., SANITARY INSPECTOR OF THE MARINE HOSPITAL SERVICE AT LIVERPOOL, ENG.

1 "Sanitary history of vessel"

In steamships making short passages or voyages, no difficulty arises as to information, but in some sailing ships, from changes in captain and crew, it is difficult to gain knowledge as to sanitary history of last cargo, crew and vessel.

2 "Sanitary condition of vessel (before and after reception of cargo, with note of decayed wood). Note disinfections of vessel." To note condition of vessel before reception of cargo, it would require a person or persons constantly at the docks to board vessels prior to reception of cargo and then report to Sanitary Inspector. With regard to disinfection of vessel, the reports given are always vague. I find in a case of infectious disease occurring that only berth or cabins are disinfected or stored, and not the whole apartment. You will please note in my report on various Bills of Health issued under head of "Note disinfection of vessel," my remark, "disinfectant used meaning that carbolic acid, etc., has been used by

sprinkling, washing or scrubbing. Not that the vessel itself has been disinfected with sulphur or chlorine.

3 "Sanitary condition of cargo"

There is always disinclination to give full particulars of cargo, unless an abstract of bill of lading is asked for. They prefer giving the vague terms of "general." The cargoes carried to the United States during our inspection have, as a rule, been good, excepting a cargo or two of rags from Alexandria and Smyrna. I am informed that a quantity of rags from both places are still stored up at Liverpool, waiting only for shipment.

4 "Sanitary condition of crew"

In steamships coming to the States, all the crew were seen and reported upon. But in sailing ships which clear in the docks it is impossible to see all, as the greater portion of the crew jump on board only when the vessel is leaving the dock gates.

5 "Sanitary condition of passengers"

Only steerage passengers are seen. No doubt it frequently happens that when seen apparently well, some few have already the germ of disease undeveloped, and are taken ill on the passage. Of course if they are noticed they are immediately sent on shore.

6 "Sanitary condition of clothing, food, water, air-space and ventilation"

On the whole, clothing, food and water, good. As regards air space and ventilation in the forecables for seamen and firemen in steamships, it is good in some, fair only in others, and in the remainder positively unhealthy. The steerage apartments for passengers are, as a rule, spacious and well-ventilated. Some few are cramped and not sufficiently ventilated, and when crowded with passengers, this condition must be felt. Fortunately, the passage is short. In a few instances the hospitals are in the steerage themselves and not too well ventilated. Others are in their proper places, i.e., on deck and amidship. In the remainder the hospitals are forward and near urninals and water-closets. In sailing vessels the forecables are mostly good and convenient.

I cannot omit mentioning the unsanitary condition of the water-closets in sailing ships and some steamers. On inspection they are found heaped up with excrement. As a rule the steamers have, or ought to have them flushed and a stream of water constantly running through them. Whenever this blockage was observed, the bill of health was refused until the closets were cleared out and disinfected. The explanations given by officers on board ships for this state of matters was, "that men who worked on board ship when loading and coaling caused it," things, they say, are different when at sea. But there must be negligence somewhere. During the latter part of our inspection marked improvement in this respect was noticeable.

Referring to vessels employed in cattle trade I cannot but think the wooden structure constantly used, must in time get saturated with filth and germs of putrefactive disease, especially in times of "foot and mouth disease," spite of the reported washings with carbolic acid and lime. A light and reasonable

iron structure would be better. This could be removed and well washed after each passage and the decks more thoroughly cleansed.

I am informed considerable amount of diarrhoea occurs among passengers coming to the United States, particularly children, and when approaching and in the Gulf Stream. Judging from the large amount of unripe fruit I sometimes see in the children's hands during inspections, may this not be the exciting cause?

If found necessary at any future time to appoint inspections, I would suggest that no vessel be allowed to enter any port of United States without a bill of health from sanitary inspectors, and not make it optional, as heretofore. Such a rule would greatly facilitate inspections.

In conclusion, I hope the work has met with approval. I am certain the inspection has been beneficial.

JOHN B. OLIVER, M.D.,
Sanitary Inspector

To Surgeon-General JNO. B. HAMITON, U.S. Marine
Hospital Service

A DAILY medical journal has just been started in Paris.

THE remains of Wm. Harvey were removed Oct. 18, from the vault under Hempstead Church and placed in Harvey Chapel in a sarcophagus provided by the Royal College of Physicians.

AT the solicitation of numerous friends, Messrs. Cole & Son (London), the well known microscopists and editors of "Studies in Microscopical Science," have undertaken to make a series of preparations, which shall serve for the perfect illustration of the text of Dr. Klein's "Manual of Histology—*Medical Press*

Dr. HERRMANN ZEISEL, Extraordinary Professor in the University of Vienna, has recently had a patent of nobility conferred upon him, Van Zeisel, whose name is a familiar word everywhere in the domain of medical literature, on account of his *Lehrbuch der Syphilis* (a fourth edition of which appeared last year), was already distinguished by the title of Regierungsrath—*Medical Press*.

DISSECTION IN LONDON.—The *Medical Times and Gazette* says: "The session has commenced in real earnest in the metropolitan dissecting rooms, as the subjoined statement of the number of bodies being dissected shows. Taking them in numerical order, at St. Bartholomew's 27, at Guy's 19, at University College 18, at the London Hospital 17, at St. George's Hospital 8, at King's College 7, at the Middlesex 6, and at Charing Cross Hospital 4 bodies were placed on the table on October 1. The mode of preparing the bodies at University College Hospital is as follows: The bodies are injected with a solution of one pound of crystallized carbolic acid in half a gallon of glycerine and half a gallon of spirit. Each body is then sewn up in calico and put in a tank, and a solution consisting of glycerine one quart, water and spirit half a gallon each, and common carbolic acid half a pint, poured over it.

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THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, NOVEMBER 24, 1883

THE BRITISH MEDICAL ASSOCIATION AND ITS JOURNAL.—It will be remembered that previous to the last annual meeting of the American Medical Association some letters from England appeared in American journals, commenting unfavorably on the management of the *British Medical Journal*, and well calculated to discourage the then contemplated publication of a journal bearing a similar relation to the national organization in this country. Since the last annual meeting of the British Association in August last some unfavorable criticisms have again found their way into American journals regarding the same subject. Some of these criticisms have reached England and attracted the attention of a correspondent there, who sends us the following interesting comments.

"I see in a letter written to one of the American medical papers by Dr. Fothergill, statements made as to recent proceedings at the annual meeting of the British Medical Association at Liverpool which are apparently intended to influence the future conduct and relations of the American Medical Association and its journal. It is well that it should be known that the statements are purely imaginative, and are apparently colored by Dr. Fothergill's desire to cover his retreat from the absurd position which he took up in his former communications. The only changes made at the last annual meeting was a change by which an intermediate and obsolete body called the Medical Council, which met only once a year, was abolished, and what was previously called the Committee of Council became the Council. To carry out this desirable arrangement the constitution of the

Council itself was slightly altered, and whereas formerly three-fourths of the elected members of the council were elected by the branches, and one-fourth by the Council, which was itself an intermediate body elected by the branches, now the whole of the elected members are elected directly from the branches. This change is of the very slightest character, in no way affects the constitution of the Committee of Council and very slightly adds to its numbers. All the previous arrangements for permanent members, past presidents, vice-presidents, treasurer, and chairman of council remain unaltered, the only change being that of giving the president of the year of the association a seat at all the committees. These amendments were proposed by the Committee of Council itself and were accepted unaltered after some rather noisy discussion by a few persons and unanimously confirmed at a special general meeting called for the purpose. No changes whatever were introduced by the general meeting into the programme proposed by the Medical Council. The position of the editor remains unaltered, and is the same as it has been for years, except that while the by-laws were undergoing the revision necessary for the purpose above stated, the clause relating to the editor was more fully expressed so as more clearly to state the actual existing relation.

"Dr Fothergill had for the last two years put upon the notice paper, a notice of motion that the term of office of the Editor should be absolutely limited to ten years. The proposition, absurd in itself, he ultimately withdrew without taking a vote on it, conscious it would have had no chance of success. The senior and permanent members of Council, whom he politely terms "barnacles," retain precisely the same position and precisely the same influence as they always have had. Some attempt was made to alter their term of office, but it was rejected by the most decisive majority, so that the Augean stable, as he courteously denominates the Committee of Council, was certainly not cleansed of its 'barnacles,' as he, by his elegant figures of speech, seems to labor to induce his trans Atlantic readers erroneously to suppose.

"The Association is in a high state of prosperous activity, and its journal now numbers 11,500 subscribers."

AMERICAN PUBLIC HEALTH ASSOCIATION —An abstract of the proceedings of this body at its recent meeting in Detroit, and some of the papers read, will be given in the next number of the JOURNAL.

NOTICE —Some delay has occurred in sending the back numbers of the JOURNAL to a considerable number of those whose names have been only recently forwarded to us by the Treasurer of the Association. This resulted from an insufficient supply of the first number issued. The deficiency, however, has been made good, and we now have an ample supply of that number for future use.

A few members and subscribers received for a time duplicate numbers of the JOURNAL. If any such have still their duplicate copy of No. 7, they would confer a favor by returning it to this office.

AMERICAN CLIMATOLOGICAL ASSOCIATION —A few weeks since in noticing the formation of this new organization, we copied the list of officers, etc., from a New York medical journal. Among the names was that of "W. H. Geddings, M.D., of Arkansas." We knew that one well-known Dr. W. H. Geddings had been a resident of Aiken, S.C., for many years past, but thought it possible that another of the same name might be a resident of Arkansas.

We have since learned that the Arkansas was a mistake, and should have been *Aiken, S.C.*, in the original reports.

SOCIETY PROCEEDINGS

AN ABSTRACT OF A CASE OF OBSTINATE "SCIATICA," WITH THE TREATMENT, INCLUDING NERVE-STRETCHING, AND RECOVERY

BY DR. GEORGE J. SINTZEL OF LONG CROVE, ILL.

During the early part of the month of July of the present year, I was called to see Miss E. S., æt 28, native of Germany, occupation, a domestic, and the daughter of a well-to-do farmer, who had been suffering for some weeks from a severe pain in the right hip. From her I elicited the following history: That she menstruated regularly, that her previous life had been healthy, except in July, 1882, when she contracted malaria that lasted two months, that after her recovery from this malady, she continued to be in good health until last April, when she began feeling pain in various joints, changing from one to another, as in rheumatism. She stated, however, that she thought her present trouble was the result of her being "barefoot" in the cellar whilst churning, because she experienced acute pain in a few hours later about the right thigh and hip. On examination, I found no swelling, but there was marked tenderness in the right hip joint, which extended posteriorly down the thigh. The pulse and temperature were normal. Judging from the history of her having had previously pains of a rheumatic character, I prescribed salicylic acid in solution, alternated with iod. pot., morphin and vin. colchicem, and had a good-

sized cantharides plaster to the surface over the joint, as I would for an ordinary case of rheumatism. I left her with the expectation of finding her much relieved at my visit next day.

Upon seeing her again, I was quite surprised to find her as she had been the day previously, and complaining of greater pain. I thought possibly the irritated surface in this region from the blister annoyed her, with, perhaps, some other effects that it might produce upon the system, notably the kidneys, which led me to examine the urine, and I did not give as much attention to the pain (the real seat of the trouble) as I otherwise would think of doing. Upon examining this secretion, I found it quite red in color, and normal in every other respect, and as there was no fever present, I considered my case "*in statu quo*." I then told the attendant to re-apply the "fly blister" toward evening, and continue the other remedies. The third day, when visiting her, I was informed that her pain had assumed a different character, that it had become jerking and lancinating, and extended from the hip down the posterior portion of the thigh, and it would shoot out at the external malleolus, it also had become paroxysmal, and was accompanied with rigors and great hyperæsthesia of the limb. Upon questioning her closely regarding any specific taint, and the characteristic symptoms of locomotor ataxia, I found that none of these were present, and I diagnosed the case to be one of sciatic neuralgia, or a typical case of "sciatica," and told the parents of my conclusion. Considering that she had been affected with malaria the year before, and with the present symptoms of "chills," I gave her 5 gr doses of quinine, with $\frac{1}{4}$ gr of morphine every two hours, and again resorted to the application of a fly blister along the course of the nerve.

The next morning she was somewhat relieved. I then increased the quinine to ten grains, given with the same quantity of morphine every three hours. In the evening of the same day, however, a messenger summoned me quickly to the patient who was raving with pain—her screams could be heard at a neighbor's house a quarter of a mile distant. Upon my arrival I injected (hypodermically) one fifth grain of morphine, inserting the point of the syringe over the course of the nerve, and plunging it deeply in the tissues. She very soon experienced relief, which lasted only fifteen minutes. I then waited half an hour and injected one-sixth grain of morphine, and this quantity was repeated successively every thirty minutes until the operation had been performed four times, when this procedure was withdrawn. For the succeeding five days she continued taking the quinine and anodynes, until the former remedy was increased to a drachm a day with no perceptible change or relief. As the disease progressed, the symptoms became more distinctively marked. The darting pain became more perceptibly of a lancinating and paroxysmal character, and was especially of a severe form at night, and varied in its exacerbation from one to twelve hours, when it would gradually subside to a milder form, but at no time was she completely free from acute pain. Her nocturnal suffering would sometimes be ameliorated by the hypodermic use of

morphia and atropia, and hot fomentations. The further treatment in the meanwhile consisted in giving her freely all the different hypnotics at command, including chloral hydrat, belladonna and aconite, and in combination with these agents we used a small electric battery to its fullest extent. This treatment was continued for ten days, and during a portion of the time we had hopes of its efficacy in that the relief would be permanent, but there was always a tendency to an increase of the trouble after a few hours or a day. As the field of remedies used in this troublesome affection are large to select from, I determined to pursue another course, and gave her phosphorus and the various chalybate preparations with arsenious acid and *nux vomica*.

The battery was also used in connection with this treatment. This with proper nourishment and the constant use of anodynes, was continued for two weeks longer with no visible signs of improvement. The patient then suggested a consultation, and this idea I was much pleased with, and Dr F E Wadhams was called to see her. We concluded to administer iod pot in large doses three times a day, and re-apply a fly-blister, also, to keep the bowels open freely, and administer only sufficient anodynes to control the pain. After five days trial of these remedies, they proved to be useless, and the operation of nerve-stretching was thought to be the only resort to effect a cure. However, other drugs were tried, including galvanism, hot hip baths, chloroform and soap liniments and massage for a number of days longer. The patient was confined continually to bed, and had been for several weeks, and as all therapeutical measures were given a sufficient length of time to produce their effect, and as both limbs, especially the right one, had become very considerably atrophied from her not being able to be about the house, although she was well nourished and had been at no time during the period of her trouble very sick, such as suffering from loss of appetite, or afflicted with nausea. The bowels remained soluble and quite regular, and the pulse and temperature normal. Her menses appeared regularly, and the flow was natural in other respects. Being disgusted with all that had been done, I insisted on the operation of stretching the nerve, which she emphatically objected to having done. I then visited her every two or three days for the succeeding three weeks, the treatment consisting chiefly of anodynes and the use of other ordinary remedies which resulted in no sign of curing the patient, and I explained to her that this additional length of time had been lost and her suffering had become quite unendurable. She now realized that something radical must be done, and she no longer resisted from dread of an operation, and informed me that she would rather die than suffer the agonizing pain any longer, and that she was anxious for it to be done. On September 23d, Dr L H Montgomery was invited in company with Dr F E Wadhams to see the patient with me, and with this additional counsel we proceeded to perform the operation of stretching the nerve in the following manner.

After she was brought under the influence of the anæsthetic (chloroform being used), the patient was

placed on her left side. Then an incision was made by the first named gentleman, corresponding with the middle portion of the pyriformis muscle, and carried downwards about three inches. After the integument adipose and superficial fasciæ had been cut through, the gluteus maximus was divided, exposing the lower border of the pyriformis. He then inserted the index finger of the right hand, and, by gentle manipulation, was soon able to insinuate one, then two, fingers under the nerve, while the limb was extended and held by an assistant. The surgeon made constant traction for 15 minutes, until the nerve was stretched from above downwards, and vice-versa, to the extent (estimated to be about one inch), it is supposed also that the operator made a traction of 80 pounds, as we determined subsequently in undergoing some experimental physical exercise. The wound was then cleansed by an antiseptic dressing of listerine, one part to six of water. There was no hæmorrhage but what was easily controlled by sponging. The edges of the wound were brought in apposition by three deep sutures of carbolized catgut and three superficial stitches, then with a simple pledget of cloth, saturated with the listerine solution, applied, which was secured with a bandage, completed the dressing. She was placed in bed, and expressed herself at once as being greatly relieved, and in the course of an hour we left our patient feeling very comfortable. I saw her again next day. She had not fully recovered from the effects of the anæsthetic, but the pain had completely ceased in the thigh. She spoke of having a slight pain extending from the knee to her ankle. I dressed the wound and administered small doses of chloral hydrate. On the second day after the operation, there was a slight rise in her temperature perceptible, the other symptoms remained the same. I prescribed two grain doses of quinine, to be given her every three hours, and dressed the wound. Third day, temperature normal, pain between the knee and ankle subsiding, dressed the wound again, and continued the tonic. Fourth day, all pain had ceased entirely, but a symptom that was somewhat aggravating had set in, as she remarked, "*There is cold water circulating through my limb*." I ordered warm fomentations applied and resumed the chloral. There was no supuration and the stitches were removed—wound nearly healed. Fifth day—The disagreeable sensation, "shooting of cold water," had considerably decreased, patient got up, treatment continued. Sixth day—The patient sat up for five hours. She felt well, but somewhat weak, and walked the first time in several months. Seventh day—She was up and about all day. No anodynes have been necessary the last two nights *and the wound is completely healed*. As the case presents nothing further of interest, I will state briefly in conclusion that the patient continued increasing in strength, her limb resumed the normal size, and she did not feel another paroxysm of pain after the operation, and the pains below the knee were extremely slight. She resumed her household duties in ten days and has remained well to date, Nov. 24th, there being not the slightest trace of any recurrence of the trouble, and she con-

siders herself in perfect health. I am fully aware that in a single case we should not base our conclusions that every one will be as promptly cured as the writer's was, but it demonstrates what an obstinate and persistent course sciatica may pursue in a young subject who has always enjoyed excellent health, *since* the presence of any specific cause or neurotic taint whatever, and contrary to all treatment, would or did not subside under any method other than that of nerve-stretching, and my not having noticed in any of the researches available a typical case of this kind, arising from the cause mentioned, nor the operation described in detail. In reporting this case from a rural district (which I regard as having passed to a chronic form, being about three months duration,) my excuse for having done so at some length and giving the readers of the JOURNAL the principal points here for record is with the hope of ascertaining more in the shape of statistics regarding the percentage of cures, either from the use of therapeutical measures or surgical procedures, either by the application of the white-heated iron or the more modern way of nerve stretching, L. H. M.

REVIEWS

THE PATHOLOGY, DIAGNOSIS AND TREATMENT OF THE DISEASES OF WOMEN. By Graily Hewitt, M.D., F.R.C.P., Professor of Midwifery and Diseases of Women, University College, London. Edited with Notes and Additions by Harry Marion-Sims, M.D., Attending Surgeon to St Elizabeth's Hospital, N.Y. New York: Birmingham & Co., 1883. 2 vols., \$2.25 per vol.

The fourth edition of Hewitt's "Diseases of Women," having been rewritten to a large extent, now appears under the auspices of Harry Marion-Sims, of New York, with various [bracketed] annotations by the editor scattered through its pages. This is a form of revision having certain advantages in the direction of clearness and completeness. The items of difference in the opinions of the author and his editor or reviser are thus sharply defined, so that reference is assisted in the casual use of the book. This is the form of annotation employed in the revised "Holmes's Surgery,"

Hewitt's treatise, in its latest as in its earlier form, lays great stress upon the factor of impaired nutrition in the production of the various deformities and malpositions of the uterus, which he believes to be the usual cause of most complaints in gynecology.

"Chronic starvation" thus underlies the writer's theories of uterine pathology, making general causes to supersede local ones, in contradiction to the ordinary assumption. In volume I this proposition is formulated as follows:

"That alterations in the shape and position of the uterus are rarely witnessed except in individuals whose general strength has become seriously impaired by a systematic, and often a lengthened practice of taking little food."

Aside from this important generalization the body of the work differs but little from the standard

treatises upon the somewhat narrow specialty it embraces

It may be set down as certain that in England the medical profession looks with less favor upon the exclusive specialists who announce themselves as such, than in this country. The operative part of gynæcology belongs very fairly to general surgery, and the rest of the subject is so closely interwoven with general medicine, neuropathology and obstetrical practice, that its narrowing tendency in late years may need some watching.

More especially is this true in America, where the weakness of all enactments governing the practice of medicine, and the scandalous looseness which prevails in the popular medical colleges of New York and elsewhere, has filled the profession already too full of half-trained and half-qualified practitioners.

Such men are peculiarly unsuited for specialists, because peculiarly apt to be narrowed and dwarfed by their want of general training.

Professor Hewitt's book is the best English treatise on women's diseases extant, and also the most popular. It is not, however, in all respects equal to similar German and American works, and is by no means so widely consulted and followed among us

E W A

MISCELLANEOUS

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM NOVEMBER 9, 1883, TO NOVEMBER 16, 1883

Bache, Dallas, Major and Surgeon, ordered to report in person to the commanding general Department of the East, for assignment to duty (Par 10, S O 259, A G O November 12, 1883)

Gardiner, Jas B W, Captain and Assistant Surgeon, relieved from duty at Fort Huachuca, and assigned to duty as Post Surgeon at Fort Bowie, A T (Par 1, S O 104, Department of Arizona, November 8, 1883)

Egan, Peter R, First Lieutenant and Assistant Surgeon, upon being relieved from duty at Fort Bowie, A T, to proceed without delay to Fort Huachuca and report to the commanding officer at that post for duty (Par 1, S O 104, Department of Arizona, November 8, 1883)

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING NOVEMBER 17TH 1883

P A Surgeon, C H H Hall ordered to the Naval Academy, Annapolis, Md

DR DOVER—As many of us as there are who prescribe Dover's powder daily, it is doubtful that more than a baker's dozen know the origin of the name Dr Dover, so says the *Midland Medical Miscellany*, the originator of "Dover's Powder," was a friend and probably pupil of the great Sydenham. He

commenced practice in Bristol, where, having made some money, he longed to make more. The roll of the College of Physicians tells us that he joined with some physicians in fitting out two privateers for the South Seas, in one of which, the "Duke," he himself sailed from Bristol August 2, 1708. On the passage out they touched at the Island of Juan Fernandez, where Dover, on the 2d of February, 1709, found Alexander Selkirk, who had been alone on the island for four years and four months, and whom Dover brought away in the "Duke." In the April following, Dover took Guaguil, a city or town of Peru, by storm. In December, 1709, the two privateers took a large and valuable prize, a ship of 20 guns and 190 men, in which Dover removed from the "Duke," taking Alexander Selkirk with him as master, and finally reaching England in October, 1711. After this cruise, Dr Dover removed to London, where his practice soon became great. His patients, and the apothecaries who wished to consult him, addressed their letters to the Jerusalem coffee house, where at certain hours of the day he received most of his patients.

THE SHOOTING OF DR ROCHARD—Dr Rochard, of Paris, was recently shot by a lunatic, who had a few days before been discharged from a lunatic asylum as "cured." He gave himself up to the authorities, and confessed that for some days he had been haunted by voices telling him that, to remove the spell that was hanging over him, he should kill some body. Accordingly he hid himself behind a tree in the Avenue Gabriel, near the Champs Elysee, and Dr Rochard being the first to pass, became the victim. At last accounts the doctor was not considered out of danger, and no attempt has been made to extract the bullet.

NECROLOGY

WASHINGTON, October 12, 1883

PROF N S DAVIS, M D, EDITOR,

DEAR DOCTOR—I observe in the September number of the *American Magazine of History* (p 260) a letter from H E Hayden requesting information as to the Brown of Maryland and Virginia, and particularly as to the Doctor Brown who was called in consultation with Drs Craik and Dick during the last illness of General Washington. The enclosed sketches of the physicians of this family of Browns were prepared years since, and are included among the manuscript biographies in the "Toner collection" of the Library of Congress. As they supply the data requested by Mr Hayden, should you deem the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION a proper channel to convey the information, they are placed at your disposal. Very respectfully,

J M TONER, M D

BROWN, GUSTAVUS, SR, was born in Haddingtonshire, near Edinburg, Scotland, and baptized the same day—April 26, 1689, died of apoplexy, at his

residence, known as Rich Hill, near Port Tobacco, Md, in 1765, aged 76. He was the grandson of Gustavus, and son of Rev Richard and Jean (Mitchelson) Brown of Lalton Haddingtonshire, near Edinburg, in Scotland. His mother was Jean, daughter of Sir George Mitchelson, of the house of Middleton, Dalkeith. The Doctor's education, both academic and professional, was acquired at the renowned schools of Edinburg.

Although quite young, he was engaged as a surgeon on board one of the King's ships, which appeared off the coast of Maryland in May, 1708, where he was permitted to land, but shortly afterward a storm arose, and the ship was compelled to weigh anchor, and he was left in America, with nothing but his clothes upon his back.

He at once made his condition known to the inhabitants, who congratulated themselves on the acquittance of an educated physician, and promptly supplied his wants. He engaged in the practice of his profession at Naujemay, Md, where, by his correct habits, skill, and devotion to his profession, he soon acquired the confidence of the people, and a large business. A record made by the Doctor himself reads "I came into Maryland in May, 1708, and in 1711 married Frances Fowlke, daughter of Gerard Fowlke, in Naujemay, who was born 2d of February, 1691. In 1711 he was married to Francis, daughter of Gerard Fowlke, one of the most wealthy and aristocratic gentlemen in the colony of Maryland. The Fowlke family was from Staffordshire, Eng and highly connected. The first of the family, says Burke's Peerage, having been knighted for services in Palestine during the crusade, as a reward for having saved the Christian camp under Richard I from a night attack from the infidels.

The doctor's professional business became large and lucrative. He was decidedly the leading physician of that period in Maryland and that part of Virginia on the Potomac, adjacent to his residence. After acquiring a handsome fortune by his profession, he returned to Scotland, with the thought that he might pass the remainder of his life there, and purchased an estate called "Cothel Manside," and entailed it on his eldest son. But after a residence of a few years, he returned with his family to his old residence at Rich Hill, near Port Tobacco, Charles Co, Maryland, where his wife died in 1744, aged 53, leaving him a family of nine daughters and one son. First, Frances, who married the Rev John Moncure, a descendant of the Huguenots of Stafford Co, Virginia, second, Sarah, who married the Rev James Scott, of Prince William Co, Virginia, third, Mary, who married Rev Wm Hopkins, and afterward Mr John Thulkeld, of Georgetown, D C, fourth, Christian, who married Mr John Graham, of Dumfries, Prince William Co, Virginia, fifth, Elizabeth, who married Dr James Wallace, of Stafford Co, Virginia, sixth, Richard, who was educated in Scotland, and attained orders in the Established Church—he married Miss Helen Bailey, in Scotland, and after her death the widow Key, formerly Miss Black, and afterward the widow Hawkins, formerly Miss Smoot, seventh, Jean, who married the Rev Isaac Campbell,

of Charles county, Maryland, eighth, Cecelia, who married first Dr Key, and after his death Mr Thomas Bond, of St Mary's county, Md ninth, Anne, who married first Rev Samuel Clagett, afterward Robert Horner, of Ripon, England, and lastly Mr Samuel Hanson, of Green Hill, Charles county, Md. Dr Brown, after the death of his first wife, married Mrs Bond, by whom he had two children, Dr Gustavus Richard Brown, at Rose Hill, near Port Tobacco, and Margaret, who married the Hon Thomas Stone, of "Havre de Venture," Charles county, Maryland, one of the signers of the Declaration of Independence. During the religious wars of Northern Europe, about 1630, a number of young Scotch gentlemen of martial spirit joined the command of the renowned Gustavus Adolphus, of Sweden, among whom was the great-grandfather of the subject of this sketch. He had the address and ability to attract the attention of the King, which led to an intimacy between himself and the Prince Gustavus Vasa. This brought him into intercourse with the royal household, and finally led to a love affair, and a secret marriage between him and a Swedish princess, the niece of Gustavus Vasa, with whom he retired to Scotland after his military engagements ended. A grandson bore the name of Gustavus, and ever since it has been a favorite name in the family. The doctor's son by his second wife was named Gustavus Richard. He received his academic and medical education in Edinburg, graduating in 1768, and practiced with great success at Port Tobacco, Md. The death of the subject of this notice was sudden. He presented during his life a costly and magnificent organ to the Episcopal Church at Port Tobacco, and was always eminent for his charities. A portrait of him in oil is preserved by his descendants in Virginia, which shows him to have been a large and handsome man. His remains were interred in a family vault on his estate at Rich Hills Md.

BROWN, GUSTAVUS RICHARD, M D, born at Rich Hills, near Port Tobacco, Md in 1748, died at the same place in 1804. He was the son of Dr Gustavus Brown, Sr, by his second wife, Mrs Bond. He received a good preparatory education and was then sent to Edinborough, where he completed both his academic and medical studies. He graduated M D in 1768, his thesis was "De oetu immahum caloris," a copy of which the writer has before him. He had for companions in his studies at Edinburgh and the Hospitals of London, Drs Reed, of Philadelphia, and McLong, of Virginia. On his return to America he settled first at New Jersey, and from thence he moved to "Rose Hill," near Port Tobacco, and engaged in practice, which soon became extensive both in Maryland and Virginia. He married Miss Graham, of Dumfries, Prince William County, Va, by whom he left three children. He was a patriot in the Revolution, attended professionally soldiers. Represented Charles county in the State Legislature in 1774, and was a magistrate, at least, took a deposition in Charles county, October 18, 1776, relative to the burning of Mr Brent's house by British forces from the armed vessel. letter of

the signer, Mr Thomas Stone, of Maryland, from Philadelphia, September 30, to the Council of Safety, mentions the arrival of Dr Brown, to whom he had written the day before. This is presumably his brother-in-law, Dr Gustavus Richard Brown, and stating that he had been very ill since his arrival (American archives, 5 sec, vol II page 602). His estate was ample, his professional means considerable, his house large and elegantly furnished, and his grounds and garden cultivated with great care and most exquisite taste. His hospitality was unbounded. He was an affectionate husband, loving father and a kind master. His reputation as a skillful surgeon, and a learned physician was quite equal to his father's or that of any other physician of his day in Maryland or Virginia. Doctor Brown, practically a neighbor, was on intimate if not confidential terms with Gen Washington, and was called in consultation in the last illness of the Father of His Country, whose death cast the deepest gloom over the American people. The doctor died greatly lamented by the public, and by a numerous connection and circle of friends. His remains are interred in the family burying ground on his farm, Rose Hill, Charles County, Md.

BROWN, WILLIAM, M D, son of the Rev Richard and grandson of Dr Gustavus Brown, Sr, of Rich Hills, near Pt Tobacco, Md, born possibly in Haddingshire, Scotland, where his grandfather left an entailed estate, and where his father married while attending the University of Edinburgh.

His education, both academical and professional, was obtained at the renowned University of Edinburgh, where he received his degree of M D in 1770. He always, however, called himself an American, and he settled to practice his profession in Alexandria, Fairfax County, Va, where he soon rose to the front rank of the profession. He was a man of polished manners and high literary culture, and was intimately acquainted with Washington, Jefferson, Madison and the leading men of that period. He was Physician-General of Virginia during the Revolution and secured land from the State after the war. He married Miss Catharine Scott, sister of Gustavus Scott, of Kalorama, near Washington City, by whom he raised a numerous family. One of his sons, Gustavus Alexander Brown, studied medicine, and practiced in Alexandria. The subject of this notice was buried at Preston, on the Alexander estate in Fairfax county, near Alexandria.

BROWN, GUSTAVUS ALEXANDER, M D, born about 1790 in Alexandria, Va, died in 1835 in Smithland, Ky. His father, Dr Wm Brown, of Alexandria, was Physician-General during the Revolutionary war. His mother's maiden name was Catharine Scott, of Scotch descent. The subject of this sketch graduated at Princeton, N J, and studied medicine at the University of Pennsylvania, graduating in 1815. The subject of his thesis was Dysentery. He commenced practice in Alexandria and continued until 1825, when he returned to Smithland, Ky, in the neighborhood of which town he owned a large estate

inherited from his father. He practiced medicine in Smithland till 1835 when he was killed in a private encounter. He was never married. His property at his death went to his heirs at law, he having died intestate. He was buried at Smithland.

J M F

IN MEMORIAM

[From 'Spence's People's Paper', Covington, Ind Oct 11 1883]

DR C V JONES, son of James M and Elizabeth Jones, was born near Peekskill, on the Hudson river, in the State of New York, March 22, 1812, and died in Covington, Indiana, on Friday morning, October 5, 1883, aged 71 years, 6 months and 13 days.

In his boyhood his parents removed to the town of Spencer, in Tioga County, New York, where he spent his youth and early manhood, surrounded by the hardships and vicissitudes known only to frontier life. As a rail-splitter and wood chopper he excelled, but while the sound of his axe was awakening new echoes in the forest, there were quickened within him new impulses and aspirations, and he honored this life of toil by using it as a stepping-stone to higher attainments. Choosing the profession of medicine, he applied himself with zeal to its study, for several years, under the private instruction of a competent preceptor. With the earnings saved from his hard manual toil, he succeeded in taking a course of lectures at Herkimer College, and securing a license to practice medicine and surgery, under the laws of the State of New York, in the spring of 1834. On April 13 following, he was united in marriage to Phoebe Watson, who has been his constant and faithful wife until this final sleep from which he awakened to enter upon the joys of the life beyond. Dr Jones came of good Methodist stock. His mother, whose maiden name was Elizabeth Sproson, was a devoted member of this church, and her father, John Sproson, was a class leader in the old John street Methodist church, in the city of New York. Of this church, Dr Jones was a life-long consistent member and supporter. His house has ever been the home of the itinerant. In 1838, Dr Jones came to Indiana, settling first in Plymouth, Marshall county, whence, at the expiration of two years, he came to Covington, where he has ever since resided. During all these years, he has been closely and prominently identified with the interests of this town and county. As a physician, Dr Jones enjoyed the respect and esteem of his profession, and his practice was very extensive. His reputation as a surgeon was especially prominent, his services as such having been required over a large territory. Combined with his skill and professional attainment, were a tenderness of heart, and sympathy with his suffering patient, which ingratiated him into the love and confidence of the household. He was the unanimously chosen President of the Fountain County Medical Society, in 1867, and upon its reorganization, in 1876, he was again chosen its President. He was a member of the Indiana State Medical Society, also of the Tri-State Medical Society, composed of physicians from Illinois, Kentucky and Indiana, and he was also a member of the American

Medical Association All of which facts, more than most profuse encomiums, speak of his standing in the profession

Dr Jones represented this county in the State Senate from 1843 to 1846 He was appointed surgeon of the 1st Regiment of Indiana Volunteers in the war with Mexico, and served one year In 1856, he was the candidate for elector on the Fremont presidential ticket In 1860, he was elected Treasurer of the county, where he served a term of two years In 1862 he was appointed provisional surgeon to the 40th Indiana Regiment, after the battle of Pittsburg Landing, remaining with it one month The following winter, in February, 1863, he was commissioned surgeon of the 63rd Indiana Regiment, and served as such until March, 1865 He served as Commissioner of the first draft from Fountain County, under appointment from Governor Morton, between whom and the Doctor friendly and confidential relations existed In all these public services, Dr Jones acquitted himself honestly and creditably, laying down the escutcheon of his position or office untarnished for his successor He was zealous in his advocacy of his principles, and uncompromising in their maintenance Dr Jones was the President of the first Grant Club organized in the United States His many acts of kindness and thoughtfulness for the soldiers are yet recounted by them with much warmth of feeling for the doctor Many times, on the long weary marches during the late war, did the doctor give up his horse to the feet worn and weary private, and take his place in the rank and file, to trudge along on foot In all his relations in life this humaneness of heart was manifested by him As a friend, he was warm and true, as an official obliging and considerate, as a neighbor, kind and helpful, as a husband and father, loving and affectionate A long life, full of kind deeds and helpful services, is closed, the memory of which will linger with this people like the sweet perfume of a rose The funeral services were conducted by Rev C E Lewis, pastor in charge of the M E church of this place, and for whom Dr Jones entertained the highest regard The 15th verse of the 17th Psalm furnished the text for the occasion His remains were deposited in the Prescott Grove Cemetery, followed by a large concourse of sympathizing friends

CAPRON, GEORGE, M D, of Providence, R I, was born in Cumberland, May 16, 1802, died at his residence in Providence, September 21, 1882 He was the son of Asa, and grandson of Joseph Capron This name is probably Italian in origin The doctor's mother was Sarah, daughter of Timothy Mahoney, an educated Irishman who came to America and devoted his life to teaching, owing to business reverses the doctor's father was unable to give his son much of an education His youth was, therefore, passed on a farm and in a cotton factory But he possessed a love for study and was in fact self-educated, acquiring while at work not only an ordinary English education but a knowledge of Latin and Greek At the age of eighteen he began the study of medicine

under Dr Levi Wheaton, but at the same time continuing his studies in the classics He attended one course of lectures at Harvard and a season at Brown University in Providence, his preceptor being at the time one of the professors in that school when he took the degree of M D, in 1823 Immediately after he began practice at Fruit Hill, when he soon acquired a supporting country practice At this period he took up the study of botany in which he attained some proficiency In 1836 he removed to Providence where he became extensively employed In 1869 he removed to the West, having accumulated some sixty thousand dollars by his profession, which he invested in mills and other property which proved disastrous He then returned to Providence and resumed practice which he continued with occasional vacations to the time of his death He was at one time physician to the United States Marine Hospital in Providence, and for three years surgeon in a State military organization, and during the war served for a time as volunteer surgeon at Hampton, Va He was elected a member of the Rhode Island Medical Society in 1826 He was an active member and filled successively all its offices, and in 1850 was elected its president He became a member of the American Medical Association in 1849 and attended meetings in 1853, 1865, 1874 and 1876 Dr Capron was a close observer and was a good writer, contributing many papers of practical value to the *Boston Medical and Surgical Journal* and to the transactions of the Rhode Island Medical Society He also published in 1844 a large popular work on medicine which had an extensive sale In 1854 he added a supplement to it He has left much unpublished material, he wrote a beautiful hand was a correct and ready composer, and rarely or never made an erasure

Doctor Capron was twice married, first, July 9, 1823, Clarinet Brown, who died in April, 1875 On June 1, 1876, he married Mary Ann Nixon, who survives him His remains were interred in the North Burial Ground, and a memorial sermon preached by the Rev Augustus Woodbury at the Westminster Congregational Church, September 24, 1882 —[From a sketch by W E Anthony, M D]

J M T

NEWMAN, WILLIAM G H, M D, of Washington, D C, was born in Princess Anne, Somerset county, Maryland, in 1827, died at his residence in Washington, November 6, 1883 He was descended from an old Maryland family that emigrated from England and settled in the State as early as 1650 He was educated at Washington College, Baltimore, and at the Jefferson College, Washington county, Pa Dr Newman read medicine with Prof N R Smith, in Baltimore, and received his medical degree from the university of Maryland in 1849 He practiced for some years in Georgetown, but returned to Washington, where he acquired a large practice in the west end of the city Doctor Newman was at one time a member of the city council, and was at the time of his death the physician in chief of St Ann's Infant Asylum, a position which he has held for fifteen years He was also for many years one of the police surgeons,

and has been for years one of the staff of Providence Hospital, was a member of the old board of health of the city, and was for some years on the board of visitors to the Washington Asylum or Almshouse. He was a member of the Medical Society of the District of Columbia in 1858, also a member of the Medical Association of the D C, and a member of the American Medical Association since 1868, attending its meetings when it convened in Washington in 1870 and 1872. Shortly after entering the profession Doctor Newman was united in marriage to Mary Rider, of Somerset county, Md, by whom he had six children, who survive him—one of his sons, Henry M, being a practicing physician in this city. On the anniversary of Dr Newman's death the Medical Society held a special meeting which was numerously attended, when resolutions of respect for his memory and of condolence with his family were passed, and the society resolved to attend his funeral. His funeral took place from St Stephen's Catholic church on Thursday morning, November 8, when a solemn requiem mass was said. His remains were followed to the cemetery by many physicians and by a large concourse of friends.

J M I

DANA, ANDERSON GREEN, M D, was born at Cambridge, Mass, Sept 17th, 1791. Died at Brandon, Vt, Aug 20th, 1861. He was the son of Rev Nathan Dana, a Baptist clergyman. At the age of 18 years he commenced the study of medicine. After three years as a student he attended a course of medical lectures in Philadelphia, in the winter of 1812-13. Shortly before this his father had removed with his family to Vermont. Doctor Dana, after leaving Philadelphia, went to Boston in the spring of 1813, and daily visited the hospitals for clinical study of surgery especially. Soon after he settled in Brandon, Vt, for medical practice, where he ever after lived. In July, 1813, he received his license to practice from Rutland County Medical Society, When Vermont Medical Society was chartered, in the autumn of 1813, Dr Dana was named in the act of incorporation. He was ever afterward a member of this Society, and was its President in 1843 and 1844. One of the original members of the American Medical Association in 1846 and again in 1849. In 1830 he received an honorary degree of M D from Castleton Medical College, and in 1860 he received the honorary degree of LL D from Middlebury College. In August (11th) 1816, Doctor Dana married Miss Eliza A Fuller, a writer of some prominence, especially of poetry, the daughter of Roger Fuller, Esq, of Brandon. Doctor Dana, as a physician, was a man of learning, of quick perceptions, of calm and deliberate judgment. He became very popular, a man everywhere known and respected. He mingled much in public affairs, in legislation, often presided at public meetings, always with marked ability, was a fluent speaker, with a ready knowledge of rules and facts.

He was physically strong and healthy, tall and well-formed. He had much personal dignity, combined with a pleasant, cordial manner, free from ostentation.

He was a member of the Congregational church, an exemplary Christian in deportment and character. During the last six or eight years of his life he suffered from disease of the heart, was obliged to retire from all active duties and live very quietly.

His life was long and useful, and he died lamented by a large circle of friends. A wise and good man gone to his rest.

O F FASSETT, M D

TURNIPSEED, EDWARD B, M D, died, aged 52, at Columbia, S C, April 18, 1883. He was born in Richland District, S C, and was educated at the Mt Zion Institute. After graduating in medicine at the Medical College of the State of South Carolina, he pursued the study of his profession for two years in Paris, afterwards offering his services to the Czar of Russia, and acting as surgeon in Sabastopol during the siege. For his distinguished services the Czar rewarded him with three decorations, including the cross of Stanne, and 1,500 roubles. During the late civil war, Dr Turnipseed acted for a time as surgeon to the 12th Regiment. He then practiced his profession with much success in Columbia, where he was much beloved, by reason of his ability and his kindness of heart. He was fond of surgery, and he performed many capital operations. He had a singularly inventive faculty, and he constructed several ingenious surgical instruments. Dr Turnipseed was an active member of the State Medical Association, and he was almost a pioneer in the organization of "Way-side" hospitals, which attained great perfection at the South during the late war. He has written an important paper on the subject.

P PEYRE PORCHER, M D

Member of Committee S Carolina Am Med Assoc'n

WAR ON QUACKERY

SPECIAL MEETING OF THE ILLINOIS STATE BOARD.—A special meeting of the State Board of Health was held on Saturday last, in Chicago, at which the President, the Hon Newton Bateman, LL D, of Galesburg, A L Clark, M D, of Elgin, John McLean, M D, of Pullman, and the Secretary, Dr John H Rauch, were present. The object of the meeting was mainly to take action in the cases of a number of medical men against whom charges of unprofessional and dishonorable conduct had been preferred. The charges against Dr Frank B Smith, formerly of Chicago, and lately of Peoria, and Dr Alexander Jones, consisted not only in the claim that they were itinerant physicians, and that they went from place to place, soliciting medical custom, but that they were associated with notorious quacks and medical mountebanks or worse, Smith being employed by "K & K," a firm of typical charlatans, having their headquarters in Detroit. Jones, it was stated, had been emulating Smith's example, but his present whereabouts are unknown. After a thorough examination of the evidence offered in support of the charges, including written statements of various witnesses, the Board ordered the revocation of the certificates of these parties.

PHOSPHORUS AS A REMEDY

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PHOSPHORUS, STRYCHNINE, AND IRON, combined in the proportions above indicated, is a safe and valuable remedy. As a nutritive tonic and stimulant to the nervous system, especially the spinal cord, it is admirably adapted for the treatment of a large number of nervous disorders dependant on defective nutrition and debility. It increases the appetite and promotes digestion. It may be safely given in all those cases in which hypophosphites are employed. It is strongly recommended in *Consumption, Neuralgia, Atonic Dyspepsia, Lowness of Spirits, General Debility*, and in that general condition of depression and loss of power popularly known as *below par*, and in *breakdown* from overwork and mental fatigue.

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No 21

ORIGINAL ARTICLES

FACTS AND NEW EXPERIMENTS IN ILLUSTRATION OF THE VARIATIONS OF PULSE-WAVE VELOCITY IN MAN, AND BEARING UPON THE ELUCIDATION OF THE CAUSES WHICH PRODUCE THEM

BY A T KEIT, M D, CINCINNATI, O

CHAPTER II

This division of our subject we will study under the form of a series of propositions, and it is intended that the facts brought forward to substantiate the

Fig 28 is from a man, aged 21 years, carotid-posterior tibial interval one-seventh second, arterial distance 50 inches, velocity of pulse-wave 350 inches per second

Fig 29 is from a man aged 55 years, cardio-dorsalis pedis interval averaging one tenth second, arterial distance 51 inches, velocity of pulse-wave 510 inches per second

The fact that pulse-wave velocity increases with age, thus so thoroughly established, signals indeed a range of variation the widest that will be noted in all our results. What now is the cause of this marked variation with age?



FIG 26, 27

propositions stated shall also enlighten on the causes of the variations in question

PULSE-WAVE VELOCITY

PROPOSITION I—The velocity of the pulse wave along the arteries increases with increase of age. This proposition has already been proven by our previous researches*. We observed and measured the pulse-wave velocity in a child of four and a half years, a man of twenty-five, and another of fifty. In the first the general velocity was 216 inches per second, in the second 306 inches, and in the third 416 inches per second. As a pertinent illustration of the fact in question, the accompanying figures representing new experiments may be studied. Fig 26 is from a child five years old, and gives a carotid-posterior tibial interval of one-seventh second, his arterial length between the points of observation measured (approximately) 28 inches, hence his pulse-wave velocity was 196 inches per second.

Fig 27 is from a boy nine years old, carotid posterior tibial interval averaging two-thirteenth second, arterial distance 38 inches, velocity of pulse-wave 247 inches per second.

Relating to the question as between the child and adult, there are four points that claim to be noticed, viz, feebler pulse-waves, smaller arteries, lower blood-pressure, and thinner arterial coats, in the child.

In the light of our experiments with tubes (1) feebler waves would have no modifying effect on pulse transmission, (2) smaller arteries would increase the rate, (3) lower blood-pressure would tend to diminish the rate, and (4) thinner arterial coats would decidedly slow the velocity of the pulse-wave. Of these factors of modification, it would seem to be just to consider the smaller arteries and lower blood-pressure as about counterbalancing each other, and then the thinner arterial coats would be left by the process of exclusion as the efficient cause of the pulse retardation in young children.

As between younger and older adults, it is plain that the only principle which can be invoked in explanation of the difference in pulse-wave velocity, is the increasing stiffening of the arterial walls with the progress of age.

The point needs to be pressed no further the velocity of the pulse-wave increases with age.

* See New York Medical Journal February, 1878 and July, 1878

PULSE-WAVE VELOCITY

[DECEMBER,

quence of the progressive stiffening of the arteries as an effect of advancing years
 PROPOSITION II —Arteries stiffened by atheromatous and calcareous degeneration give a rapid pulse-wave velocity

PROPOSITION III —The velocity of the pulse-wave is directly proportional to the stiffness of the arterial walls

PROPOSITION IV —Variation of the pulse-wave velocity as the result of variation of blood-pressure is

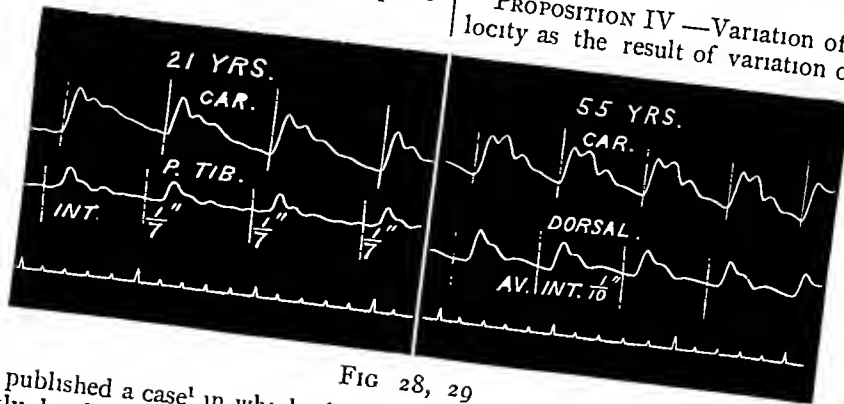


FIG 28, 29

We have before published a case¹ in which the arteries were greatly hardened by degeneration, as found post mortem, and in which the carotid radial interval was measured at 1/30 second

Fig 30 is from a woman aged 65 years, who had a

not easily made manifest

For purposes of comparison the general blood-pressure may be reduced by bleeding by the hot bath, by nitrite of amyl, etc., and is found reduced in adynamia, and increased notably in Bright's dis-

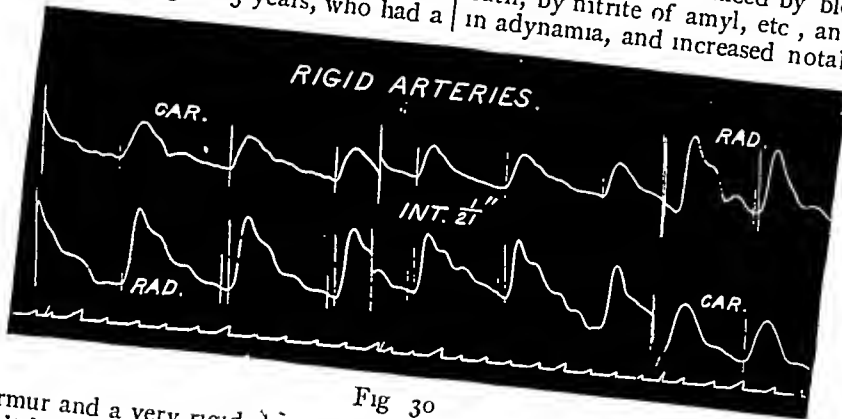


Fig 30

basic systolic murmur and a very rigid, knobby, radial artery, that felt like a cord high up in the arm, and who subsequently died from cerebral apoplexy, the result, undoubtedly, of rupture of a degenerated intra-cranial artery. In these traces the carotid-radial interval measures 1/21 second

We instance here, first, the hot-bath experiment

Fig 31 shows tracings of the right carotid and left radial pulses from a man aged 30 years, taken just before the bath, and then while in the bath after marked modification in the circulation had been effected

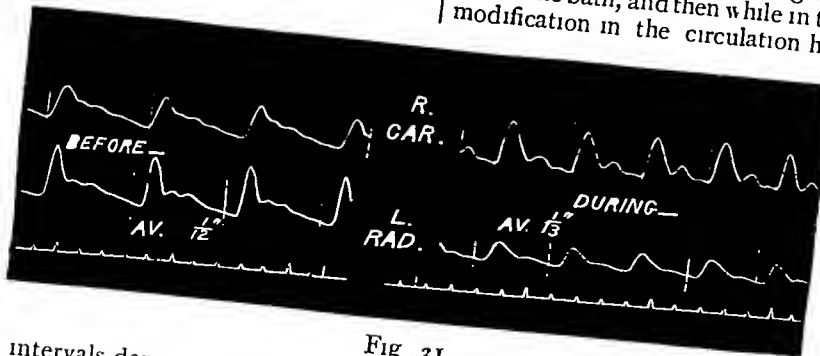


Fig 31

These cases and intervals demonstrate the rapidity of pulse-wave transmission along pathologically hardened arteries, and, in connection with the foregoing facts, afford ample proof of the following proposition

Notwithstanding the great reduction of the blood-pressure, as indicated by the form of the traces and lower pressure, by the manometric tube, at which the radial pulse was best developed, the time intervals before and during the bath were nearly equal, averaging under the first condition about 1/12 second, and under the last about 1/13 second

¹See *New York Archives of Medicine* October, 1882 p 118

It was to be expected that such depression of the blood-pressure would have signaled a corresponding slowing of the pulse-wave velocity, that it did not was probably owing to the influence of compensating conditions. Thus the arterial tube, in consequence of rapid escape of its contents through the open ca-

blood-pressure would be counterbalanced by the accelerating effect of arterial tubes contracted to adapt themselves to contents lessened by general anemia as well as free capillary passage, to say nothing of the inadequate arterial supply as an effect of the mitral regurgitation present in the case



Fig 32

pillaries into the veins, would diminish the caliber, and, so contracting, thicken its walls. These changes would expedite the transmission of the pulse-wave, and in the case shown more than neutralize the impeding effect of the lowered blood-pressure.

Our next illustration is from a well-grown boy,

Our third illustration is furnished by the influence of nitrite of amyl on pulse transmission.

Fig 33 is from the same man, who gave the traces (Fig 31) of the hot bath experiment. In this instance his left carotid and right radial were taken, it being observed that his right radial was more su-

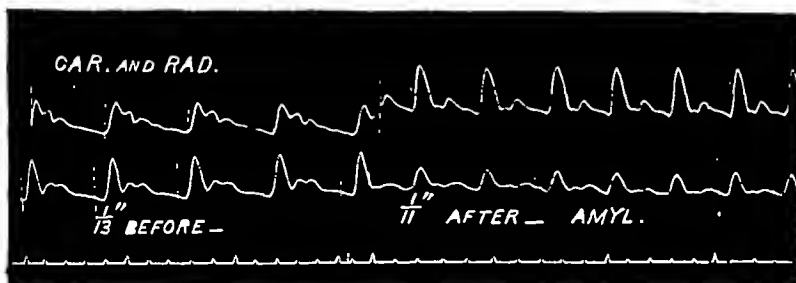


FIG 33

aged 17 years, suffering from severe and protracted typhoid fever complicated with mitral insufficiency. The traces shown (Fig 32) of the carotid and radial pulses were taken on the thirty-sixth day, when adynamia was well pronounced, temperature 101° , and pulse to the fingers, frequent, small and very com-

perficial and gave a better trace than the left. When all was ready his standard was first traced as shown in the first part of the figure, then the slide was halted, the explorers being kept in their positions and the amyl inhaled until its peculiar effects were manifest, when the slide was started again and the experiment

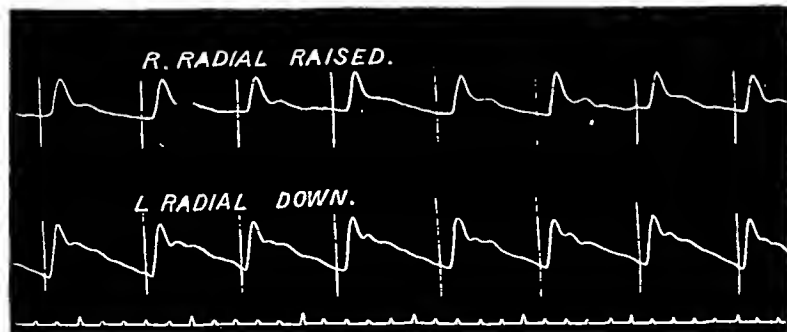


FIG 34

pressible. It will be observed that the average time interval— $\frac{1}{15}$ second—corresponds closely with normal showings, notwithstanding the evident low-blood pressure under which the experiment was made.

The default in this case we would explain as in the last, only the retarding effect of the extremely low

finished

The carotid-radial interval measures from $\frac{1}{14}$ to $\frac{1}{11}$ second before, and about $\frac{1}{11}$ second after the inhalation.

In this experiment vaso-motor paralysis would dominate all other modifying factors joining its re-

tarding force to that of induced lowered blood-pressure, and antagonizing reduction of arterial caliber, and so obviating or diminishing the speeding effect that would otherwise ensue therefrom

Continuing our researches on the influence of different blood pressures, we will next study the effect

from different persons and by the two methods mentioned, exemplify very common phases of result

The fact that the delay is often small and sometimes fails to manifest under conditions of such revolution of blood-pressure leads us to seek, and, we believe, to find the explanation of the variable

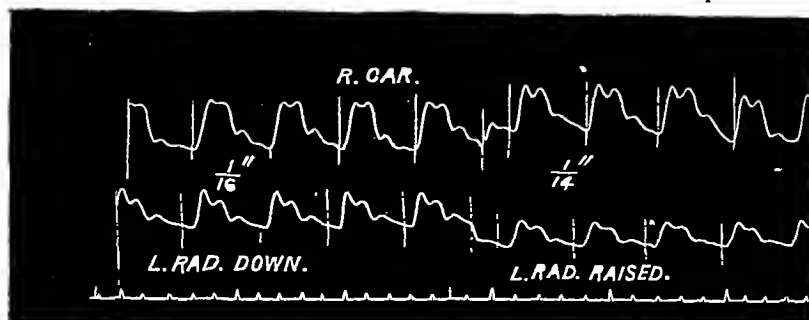


FIG 35

of variation produced in certain arteries. The blood pressure in the arteries of a limb is markedly depressed by elevation, and elevated by depression of the limb. Accordingly if the two radials, which normally are synchronous at the same level, are traced with one arm considerably higher than the

effect of the experiment in behavior of the arterial coats. When delay is great the coats are left relaxed after retreat of the blood, on the contrary when the delay is slight or nil, the coats contract as the contents depart.

The change from standing to lying with trunk and

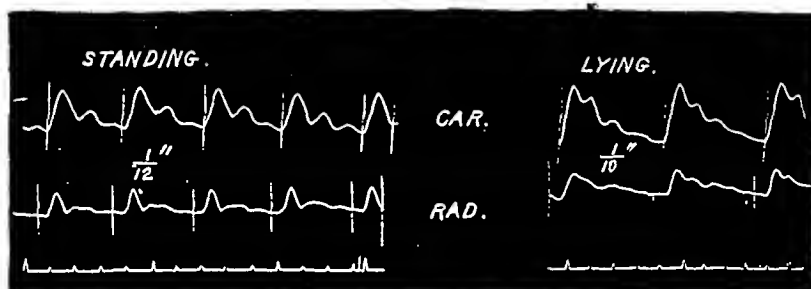


FIG 36

other, the result will be instructive as to the influence on pulse transmission of a suddenly lowered blood-pressure. Or the same end may be accomplished by tracing a carotid and radial with the radial first depressed and then elevated, and afterward comparing the intervals before and during the elevation

head horizontal and lower limbs highly elevated, must cause a very considerable augmentation of blood pressure in the arteries of the upper extremities.

Figure 36 is an example of the carotid and radial traced under these opposite conditions.

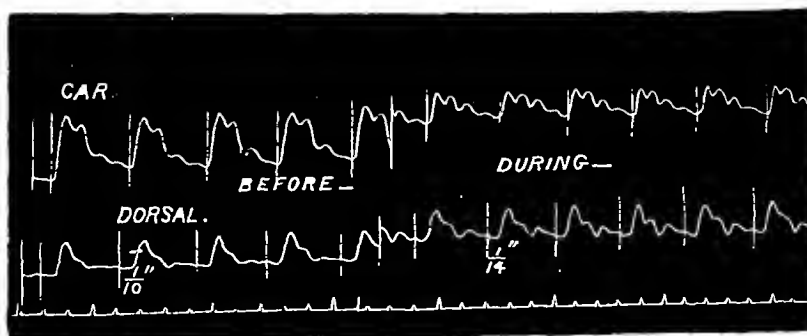


FIG 37

of the arm

The experiment by one or the other method we have performed many times, and usually with more or less retardation of the elevated pulse, but sometimes without any difference. Figures 34 and 35 taken

The intervals are $\frac{1}{12}$ second standing and $\frac{1}{10}$ second lying. So we have here the paradoxical result of a slower pulse-wave velocity following directly upon increase of blood-pressure. Can we explain the phenomenon? The speeding influence of increased pres-

sure is antagonized by the slowing influence of enlarged tubes and walls made thinner and more elastic by distension. We may suppose that arterial tone is a somewhat variable entity, as stimulated by interior pressure, in one instance permitting the fibers to relax to an extent, softening the walls, in another tightening the fibers, stiffening the walls.

"The effort," by which is meant making a strong expiratory effort with the glottis closed, compresses the aorta and thoracic and abdominal viscera, driving the blood into the arteries of the extremities, raising their blood-pressure in a marked degree. We have often made the experiment for testing the rate of pulse

tioned whether variation of blood-pressure acts at all except as it influences arterial elasticity. We have seen, how, in experiments with inert tubes, increased pressure produced no increase of wave velocity until tubes were employed whose walls were as lax or laxer than those of living arteries. And we have just seen how in experiments on living arteries no certain acceleration follows increase, or retardation decrease of blood-pressure. Such a result both on the schema and man was unexpected, nevertheless the logic of facts must be accepted.

PROPOSITION V.—The velocity of the pulse-wave varies without notable change of the conditions

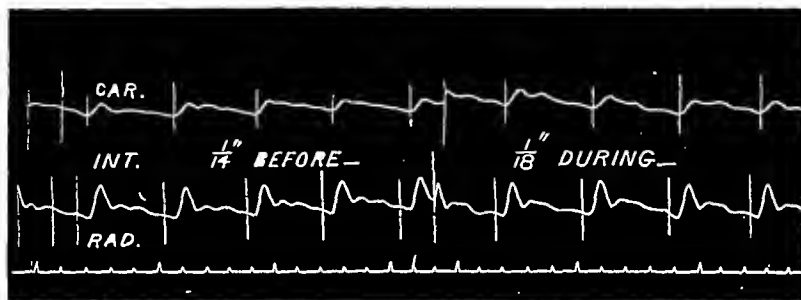


FIG 38

transmission before and during the effort, and almost invariably with the result of proving a swifter transmission during the effort.

Fig 37 is a fair example of result in this experiment in which the carotid and dorsalis pedis were traced.

Intervals about $\frac{1}{10}$ second before and $\frac{1}{14}$ second during.

Sudden compression of the femorals is another means of augmenting the pressure in the arteries of an upper extremity.

Fig 38 is from a boy, aged nine years, the same that produced Fig 27, taken before and during compression of femorals.

Traces already produced afford abundant evidence of this incessant oscillation of pulse-wave velocity. A critical measurement of the successive time-differences in the figures will prove a slight variation between most of them, and between some a difference quite marked. For illustration, we refer to Fig 27, where the carotid-posterior tibial interval in successive pulsations, quite uniform, changes from $\frac{1}{6}$ to $\frac{1}{7}$ second, also we produce a new illustration.

Fig 39 is from the same young man who furnished Fig 28, and both were taken on the same day. The time differences of Fig 28 vary but little from $\frac{1}{7}$ second throughout, while those of the present figure show considerable variation, and the average is less

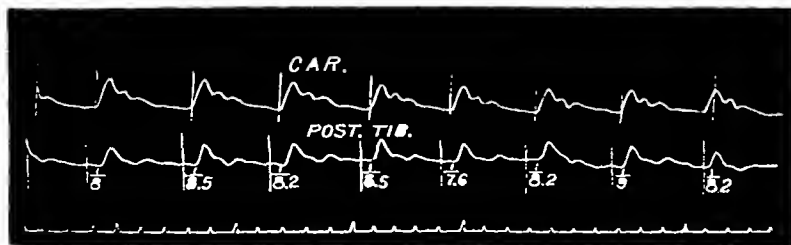


Fig 39

Carotid-radial interval $\frac{1}{14}$ second before and $\frac{1}{18}$ second during.

In explanation of the result in the last two experiments we only remark that the modifying forces were so acting as to throw the balance on the side of pulse-wave acceleration.

It is not deemed necessary to produce other experiments in illustration of the proposition before us. All the experiments go to demonstrate the inefficiency and uncertainty of variation of blood-pressure as a direct modifier of pulse wave velocity. Indeed, in view of the results obtained, it may fairly be ques-

tioned whether variation of blood-pressure acts at all except as it influences arterial elasticity. So here are two runs of traces taken from the same arterial points of the same subject, under similar conditions, and the time intervals in one averaging $\frac{1}{7}$, and in the other less than $\frac{1}{8}$, second.

Further, we carefully measured each time-interval of Fig 39, and marked the result in the fractions on the slide. The measurements, converted into decimals, read in order, 125, 117, 122, 117, 131, 122, 111, and 117, second, which gives an average of 120 second. Besides, with traces from the same

months previous, the time-differences vary around $\frac{1}{6}$ second

If it be thought that these variations may be results merely of instrumental and mensural errors, we reply that this is impossible. In the method employed it has been proved that the range of instrumental error is so small that it may be neglected, and possible errors of measurement are insignificant, compared with these differences. Again, when we measure successive intervals between waves in inert tubes, the fractions obtained are remarkably uniform. Thus in Fig 3, the formula of measurement runs without material variation— $\frac{5}{24}$ of $\frac{2}{5} = \frac{1}{12}$ second, and if it be found that the numerator varies from 5, it will also be found that the denominator correspondingly varies from 24.

Another point is, that in the repetitions with the same tube, under the same conditions, the intervals were always the same, while in repetitions with the same individual, under apparently the same conditions, the intervals are often unequal.

Then we deem it sufficiently demonstrated that the variations in question have a real existence.

same status at each pulsation, whether the intervals between the waves be long or short, and, second, that quickness of pulse, which usually accompanies frequency, can have no influence upon pulse transmission, since it has been demonstrated that a quick wave and a slow wave travel along the same elastic tube at the same rate of speed.

PROPOSITION VII—The velocity of the pulse-wave is different for different arterial tracts. This proposition has already been well established, and for its illustration here we reproduce a figure previously published,¹ which gives the result of an experiment, in which the pulsation of the heart, carotid, femoral, radial, and posterior tibial, arteries, and the time in fifths of seconds, were traced simultaneously.

This experiment, so prolific in facts, gives the following results regarding the pulse transmissions along different routes. Carotid-femoral time, 0.097", which, with a distance of 18 inches, gives a pulse velocity of 226 inches per second. Carotid-radial time, 0.097", which, with 23 in distance, gives a pulse velocity of 288 in per second. Femoral-posterior tibial time,

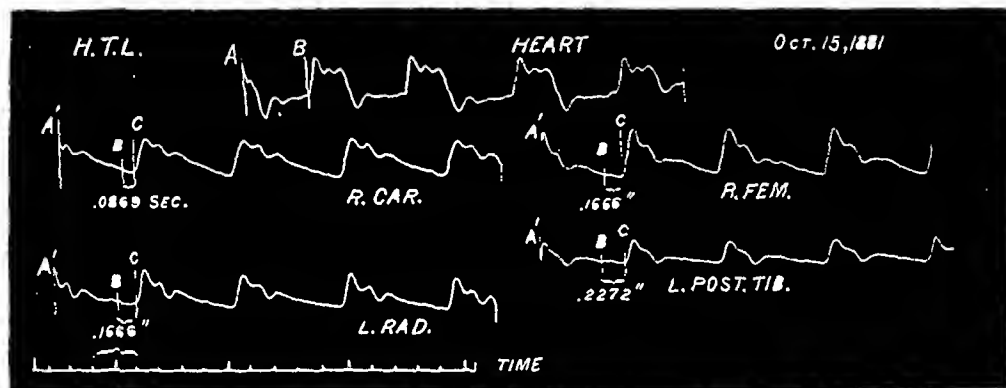


FIG 40

One theory alone can be offered in explanation of these variations, viz, that the state of contraction of the arterial fibers varies at short intervals, and, so hardening or softening the arterial tubes, causes the pulse-wave to travel with swifter or slower velocity. No other modifying factor can be invoked, and variation of arterial elasticity we have seen is a certain and potent modifier, moreover, there can be no hesitation in accepting as a physiological fact such implied variation of arterial tone. In a word, under the conditions named, the velocity of the pulse-wave varies in consequence of variations of arterial tone, increase of tone causing increase, and decrease of tone, decrease of velocity.

PROPOSITION VI—The pulse-wave velocity is not modified by variations of pulse frequency. This fact has been sufficiently illustrated by results already produced. Instance Figures 31 and 32, in which, notwithstanding marked increase of frequency of the pulsations, the time-intervals remained at normal values.

Indeed, the proposition would be sustained by considering, first, that the artery starts to rise from the

0.0606", which, with 33 in distance, gives a pulse velocity of 544 in per second.²

Thus it is well shown how the rate of pulse transmission varies in value along these different lines, and now the problem as to the cause of these differences presents for solution. Pertaining to the arteries there are four points of difference in condition, viz (1) difference as to giving off of branches, (2) distance from the heart, (3) state of elasticity, and, (4) size. The question as to any modifying influence of the first two has been settled in the negative by our results with tubes. As to the third, it is a well-known fact that the aorta is highly elastic, its coats are thick, yet extremely soft and pliable, and yield with the greatest readiness to increase of interior pressure, to promptly return when the pressure diminishes. The aorta, it is safe to say, is more exquisitely elastic than the arterial trunks of the ex-

¹New York Archives of Medicine, June, 1882, p 237.

²The cardio arterial intervals are expressed on the cut and the arterial intervals are obtained by deducting the lesser cardio arterial from the greater thus cardio femoral interval .1666"—cardio-carotid .0869, gives .0797, is the carotid femoral interval, and so on for the other arterial intervals.

tremities, and to this difference in elasticity we are led to attribute in part the comparative slowness of aortic pulse transmission. And in regard to the small but real difference of rate between the upper and lower extremities, an assumed greater resistance in the arteries of the lower is the only explanation that offers of the faster transmission in the latter.

Difference in size of the arteries is in reality the potent factor which makes the pulse travel slower along the aorta than along the other arteries. This conclusion is inevitable when we remember the law that wave-velocity is proportional inversely to the size of the tube traversed, and the fact that the aorta

PROPOSITION IX —The velocity of the pulse-wave is diminished in arterial trunks affected with vaso-motor paralysis.

This proposition is a necessary corollary of facts already acquired. In vaso-motor paralysis the arterial coats are relaxed and the arterial caliber enlarged, both of which conditions are effective factors of pulse retardation. Besides, we have published a case¹ with tracings in which the phenomena of general vaso-motor paralysis were well declared, with coincident remarkably slow pulse transmission.

PROPOSITION X —The time of appearance of the distal pulse is delayed in aneurisms with yielding

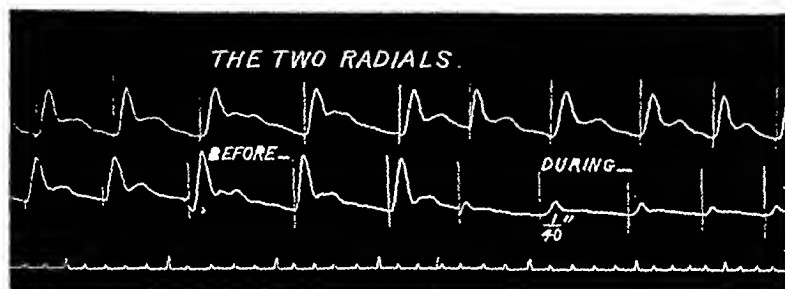


FIG 41

is manytimes larger than the arteries of the limbs.

PROPOSITION VIII —The time of appearance of the pulse-wave is delayed in arteries in which the blood column has been much reduced by obstruction of the current.

The experiment upon which this proposition depends for proof is readily made on man by tracing the two radials before and during compression of one axillary or brachial, or by tracing the two posterior tibials or dorsals before and during compression of one femoral or popliteal, or again, the method may be pursued of tracing a near and more distant arterial point, as the carotid and radial, before and dur-

walls and free communication with the artery, while there is no delay in aneurisms with resisting walls, even though freely communicating, unless the aneurisms directly obstruct the arterial current, or diminish wave velocity by producing vaso-motor paralysis.

The clinical proofs of this compound proposition have been well furnished by François-Franck¹ and the author,² whose publications contain graphic illustrations of the points from actual cases.

From this study we deduce the following resume of the more prominent facts:

1 The velocity of the pulse-wave is determined above all by inherent states of arterial elasticity, be-

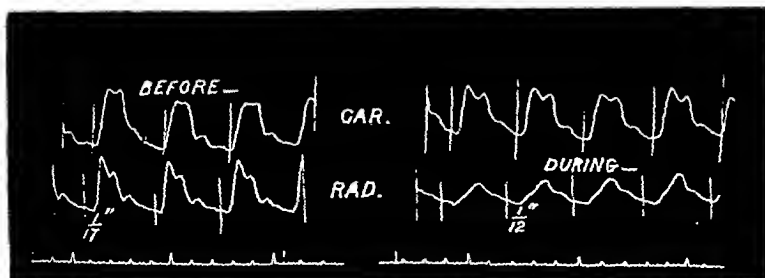


FIG 42

ing compression of an intermediate point, as the axillary or brachial.

Figures 41 and 42 are examples of results from such experiments on two individuals of different ages. The delay in either occasioned by the obstruction is about $\frac{1}{10}$ second.

In explanation of pulse delay from this cause, from our experiments on tubes, we need take no other account than that of check at the site of obstruction. The condition of the artery below, if contracted and diminished in size (which is probably the case), would only tend to lessen the delay.

ing slower as the arteries are more elastic.

2 It is incessantly changing, within small limits, in consequence of variation of arterial tone, being faster as the tone is higher.

3 It diminishes with the size of the artery traversed.

4 It tends to increase with increase of arterial pressure, but modification from variation of pressure often fails to manifest.

¹ New York Medical Record Nov 29 1877.

² Journ de l'anat et de la physiol — t. xiv (Mars Avril 1878) et t. xv (1879).

³ 1 Med Record Nov 29 1877.

5 It is not perceptibly modified below the site of an arterial obstruction, but the distal wave is delayed there in consequence of check at the site of obstruction

6 It is not perceptibly modified in an artery below the site of an aneurism, although the distal wave may be delayed there in consequence of absorption by the yielding aneurismal walls

THE EMINENT DOMAIN OF SANITARY SCIENCE, AND
THE USEFULNESS OF STATE BOARDS OF
HEALTH IN GUARDING THE PUBLIC WELFARE

BY JAMES E. REEVES, M.D., SECRETARY OF THE STATE
BOARD OF HEALTH OF WEST VIRGINIA

[Read before the American Public Health Association at its annual meeting held at Detroit November 14, 1883.]

MR. PRESIDENT—I propose a few inquiries into the truth of a proposition which I consider vitally important not only to the State, but to the general interest of every social institution. The proposition to which I allude may, with some convenience, perhaps, be expressed in the following terms:

Without obedience to the laws of health, it is impossible to secure the highest culture of the citizen—physical, moral and intellectual—and perpetuate the prosperity, freedom, and glory of the State.

Should I succeed in establishing the truth of this proposition, the labor of sanitarians will be more justly appreciated, as well as the immense agency exerted by State Boards of Health amid the restless activity and excitements of the social and political elements of our advancing and complex civilization.

The principles of sanitary science are not of modern origin. Indeed, they are as old as the Mosaic code, and their unerring rewards and penalties have marked the life-history of all the nations that have covered the earth. In their scope they are wide enough to embrace all humanity, and just as applicable to communities of to-day as they were to the Jewish race thousands of years ago.

It may be truthfully said that the business of sanitary science begins and ends with man, but language has no single or compound word which fully expresses its varied relations—its social forces and necessities to human life and human society. Its aim is the growth of an improved race—a healthy life—a useful life—a happy life—and as long a life as possible. Commencing with utero gestation, it compasses birth, infancy, childhood, adolescence, puberty, adult life, maturity, thence along the declivity to old age, and to death. Every influence of food and drinks, clothing, exercise, education, soil, and climate, comes within its purview. Good health, therefore, embraces *value* in the broadest sense of that term. On the individual it confers happiness, dignity, and a thousand advantages in the struggle of life. To the State it gives wealth, power and freedom.

Public health ever goes hand in hand with true liberty, and is the companion of orderly habits and pure morals. During the fourteenth century, when vice and misrule in Europe had their greatest sway,

and the beautiful fruits of civilization were trampled under foot by barbarian warriors, when acquisitions that had cost mankind ages of toil and millions of money were lost in the general wreck, when the night of ignorance was darkest, and human degradation sunk to the lowest depths—then hygiene was neglected, and plagues numerous and almost universal rested upon the people.

But this is only one of the many examples that could be adduced in proof that general health and longevity are inconsistent with ignorance and slavery. Greece, with the loss of her liberty and the ruin of her cities, has an altered climate, dating back, perhaps, from the years of the Peloponnesian war—more than four hundred years before the Christian era—when polished and populous Athens was devastated by fire and sword, and plagues followed in the train to complete the horrors of her lamentable desolation and downfall.

In London, about the middle of the sixteenth century, the population was estimated at half a million, and the average duration of life was only twenty-five years—*eighty* dying annually out of every thousand of the population. The streets were narrow, scarcely paved, and equaled the imperfectly constructed sewers as receptacles of all manner of abominable filth, the dwellings, principally of wood, were overcrowded, and no attention whatever was paid to their ventilation, water was scantily supplied, personal and domestic cleanliness were neither encouraged nor enforced, and the city was given up to licentiousness. Then, in 1665, London was visited by plague, and it is recorded that in one night three thousand persons perished from that terrible disease, and that up to 1679 the mortality from that source alone amounted to one hundred thousand. But now, with its improved sanitation, its stupendous sewers which have been recently completed at a cost of twenty millions of dollars, and its population increased to millions, how different the result! Instead of twenty-five years, the average duration of life is above thirty-seven years, and the rate of mortality, instead of fifty, is a fraction less than twenty-four in a thousand of the population.

Calcutta, built on a swamp on the east side of the Hoogly, and, at a few miles distance, surrounded by lakes which are supplied from overflows of the river, by a proper system of drainage of that part of the city inhabited by Europeans, has become as healthy as any country of the same latitude on earth, while, on the contrary, Stockholm, built on small islands at the entrance of Lake Malar, with a mean annual temperature of 40° F., and possessing the requisite natural advantages, if properly guarded and improved, to make it one of the healthiest cities in Europe, is, because of gross disregard of sanitary laws—imperfect drainage and a bad supply of water in houses—one of the *unhealthiest* in that quarter of the globe, as shown by the death-rate.

Sanitary science, therefore, is a segment of political economy, and should receive encouragement by the State as a wealth creating factor—riches, indeed, to the whole people far above that of any other earthly value.

It has become a classic saying that "public health is public wealth," but who can estimate it rightly? Every case of sickness and the loss of every life from preventable disease is a tax upon the material wealth of the State and a great sorrow to the family. Count the number of deaths in a community for any given period, multiply it by *thirteen*—the estimated number of sick on hand for each death—and you have the average total of sick persons cared for at an expense much greater than would have been necessary for their support in health. In addition to this estimate, let us remember that at least *one third* of all the cases of sickness and of the deaths that occur are preventable, that this suffering and continuing tax on health and life is in direct antagonism to industry and the general prosperity, that the visitation of diseases falls heaviest always on the poor and most helpless classes of the community, and that the pressure of bad health and poverty, with their far-reaching ill effects upon the growing and reproductive parts of the population, tends to deterioration of the race.

In times of epidemic visitation, all these ill influences culminate in general distress of the people. Let Asiatic cholera come, smiting the young and the old, withering the pride of manhood and the beauty of youth—in many sections marring, in others obliterating the festivities and gayeties of life, robbing the social circle and the family group in the garments of grief, spreading the gloom and striking the panic of sudden death—then, for the time, possibly, the value of public health, as well as legal statutes to protect it, will be justly appreciated, for, besides the general affliction from sickness and death, the direct loss in money would probably equal in amount, during the time, the whole expenditures of the national government.

Political economists have said that the cash value of the life of an able bodied, industrious man is sixteen hundred dollars, and that the average value of men, women, and adolescents of both sexes above twelve years of age, is one thousand dollars. Now, accepting this estimate as a fair and proper basis for calculation of the wealth stored up in the United States, we may have some conception of the real value of the earnings of the *human machine*.

Besides native wealth, our country is enriched annually from immigration. Every steamer that plows its way to our shores comes freighted with human souls, to swell the population of this country and enlarge the profits of labor. No migration of men has occurred in the world at all similar to that which has been pouring itself upon the shores of the United States for the past five years. In a single week we have again and again received into the bosom of society numbers as great as a Gothic army possessed in its ranks, and passed them away without hurt and without terror. Week after week, again and again they come—each vessel bringing frequently a thousand souls, a number greater than was borne by a fleet of many ships in the days when Greece invaded Ilum, or Xerxes, Greece.

The question of immigration is, therefore, one of grave importance to American statesmen. It involves political, moral, and social consequences of a

magnitude too vast for common apprehension. Who shall assume to tell what precise result will follow in this country from the bringing together of races of men hitherto comparatively isolated? Or who shall say whether the intellectual and physical power of the Anglo-Saxon, the cool and industrious vigor of the Teuton, or the elasticity and fire of the Celt, shall be the controlling influence in the coming time? That the inferior must recede or disappear before the superior races is an inevitable result, sanctioned alike by reason, analogy, and the indisputable records of history. Nature's leaves, wherever civilization and science have unfolded them, bear the plain evidences that such has been the eternal course of her wise, although sometimes inscrutable, laws.

Let us hope that from the fusion of all these different families and different bloods there shall spring a composite race of men of far greater capacity than those who at present govern the nation—a race which shall have no jarring prejudices, and be animated by only the loftiest sentiments for the common welfare.

It is computed that by immigration our country is annually enriched \$50,000,000, and with net profits of labor amounting to \$65,000,000. The great Northwest is receiving the larger share of this wealth, but along with it there are some threatenings and dangers which well deserve wise attention. The immigrant brings with him not only his money, but also his habits of life and heredity. These may either be very good or very bad. If the former, then his citizenship is a substantial acquisition to the wealth of the state. If the latter, he is at once both a moral and physical leper, and of incalculable danger to society. Fortunately, however, thus far the assimilative and moral forces of our American institutions have been sufficiently active to absorb this immense immigrant mass, and convert it into strength of the nation.

But notwithstanding the seeming capability of our institutions to swallow up, easily digest, and assimilate the stream of humanity which is constantly pouring into this country from the Old World, we must not shut our eyes against the manifest and increasing tendency of this commingling of moral and social habits to greater latitude and excesses than are to be found in either of the parent countries. In other words, the demand for labor of every character, its handsome rewards, and the plenty of money, are powerful temptations to influence a departure from simple and correct habits of life, with their almost never-failing accompaniment of good health.

The popularity of the milder alcoholic beverages—ale, beer and wine—is directly due to the influence of our adopted fellow citizens in all classes of society. I should be untrue to myself, to my position, to the medical profession, and to humanity, if I let this opportunity pass without sounding a note of warning against the intemperate use of alcoholic drinks, and to speak of their influence to debase the citizen and his progeny—physically, morally and mentally—and deny him and them good health and longevity.

The connection between drunkenness and crime, and between drunkenness and poverty is close and unvarying in its effect upon society. The remarkable

increase of insanity in recent years may, in part, be traced to the prevalence of the intemperate use of intoxicating liquors. That wine, beer, and the stronger beverages, when taken in excess, all tend to derange the mental manifestations, is a fact too familiar to medical men to require of me argument to prove its truth. They act upon and disorder the brain more directly, perhaps, than any other organ, and, by habitual excess, may at last induce permanent impairment of the mental faculties.

In times of epidemic visitation—when pestilence is sweeping the country—the intemperate and the drunkard are the first to fall by its arrows of death, and the chances of recovery from any disease or injury whatever are infinitely less for the drunkard than for the sober man. Were man to live as he should do—*enjoying* every good gift and *abusing* none—he would (saving accidents) live to extreme old age without disease. But alas! how many such careful, prudent, temperate lives could there to-day be found in this great country of ours, where a kind Providence has made it possible for us to enjoy every blessing the whole world can afford? The denunciation by the prophet Isaiah—“*Woe to the drunkards*” “*Woe to them that are mighty to drink wine*”—is not only in course of fulfillment every day with the drunkard, but the *curse* extends to his children yet unborn, even to the third and fourth generation, by inheritance of appetites which are far more constant and certain in their descent than patrimony.

It has been asserted that at least seven-tenths of all the crimes and poverty and calamity to the people of the United States sprang from the abuse of personal liberty in the use of spirituous, vinous and malt liquors, and, if the charge be true—either in whole or in part—it is a subject which should concern sanitarians. Vice needs every possible exposure and discouragement to prevent its seeds from growth, and the lesson should everywhere be taught that good health and long life cannot dwell in association with a poisoned mind or an upbraiding conscience.

The public-school system of the United States is the great national laboratory for shaping, refining, and directing, on a progressively higher intellectual, moral and social plane, the tendencies of American citizenship. Into its plastic mold the children from immigrant families are freely mingled with native English-speaking youth, the lessons there taught and the manners prescribed and enforced are carried to the homes of the children in every class of society to cultivate and ennoble the aspirations of parents and guardians, and combat immoral and debasing influences which have crept into our civilization.

In the American public school system, therefore, are centered the greatest trusts and the brightest hopes for the future of the republic. It is the nursery of statesmen, philosophers, scientists, and patriots, and, being invested with such a high and mighty alliance of interests, it has become the particular care of sanitarians as the vineyard for the nurture and growth of a healthy race of men and women who shall lead the whole world in civilization. How important, then, that guardians, principals and teach-

ers in our common schools shall be thoroughly qualified, by special training in physiology¹ and hygiene, for the discharge of the high responsibilities with which they have been clothed by the community and the State!

If the opportunity of the school-room for the dissemination of the principles of sanitary science were properly appreciated and diligently improved by teachers, it would soon come to pass that all classes of the people would pay respect and render obedience to its laws. Physiology and hygiene should receive far more attention than is now usually given these studies. At present, in many schools, they are treated as if they belonged to the *ornamental branches* of education rather than the *useful* and are taught by *title* instead of by direct practical examples gathered from the every-day life of school-children.

In country districts school life has many more exposures to unhealthy influences than are suffered in towns and cities. For example, it is no uncommon experience for some of the children to walk two or three miles—sometimes double that distance—every day they attend school, and when the weather is wet and the roads muddy, they are frequently compelled to enter their classes with cold feet and damp clothing, and remain in that chilly, uncomfortable condition until the period of recess arrives, or, may be, until their return home in the evening. In winter time, when the roads are icy and slippery, or when the ground is covered with snow, and travel on foot most disagreeable and fatiguing, those who have long distances to walk must hurry their footsteps to escape being tardy at roll-call, and when entering their classes are all aglow and perspiring. In that condition they take their seats, soon feel chilly and are too sleepy and stupid to take interest in the lessons. At noon, when the hour for dinner arrives they eat hurriedly the cold food contained in their little baskets and buckets, but not usually with as sharp appetite and good digestion as when they are at home. Immediately after dinner they engage too vigorously in all sorts of play—running, jumping, “chasing the fox,” base ball, and various other fatiguing and relaxing exercises—so that by the time of the call “to books,” they are as tired and indisposed to study as when they reached school in the morning. Then after dismissal in the evening they are again tired out by the walk home, and thus they are more or less exposed to unhealthy influences every day during the school term.

The management of country schools should provide special accommodations for the relief and comfort of children who come with damp clothing and wet feet. This can be easily accomplished in a well appointed reception room for each sex, where should be kept always on hand and ready for use a sufficient number of pairs of shoes and stockings of different sizes, also several warm wraps with which to clothe and warm the tenderest of the exposed pupils until their own shoes and stockings and other garments are dry enough to put on, and they are ready to enter their classes.

¹ Dunglison's School Physiology is admirably suited for use in public schools and is probably the best of its class.

Parents who are able to do so should be encouraged to supply the school store room with an extra suit of clothing for each child they send, and, no doubt, in every community there could be gathered enough subscriptions of that kind from humane, well-to-do persons and families to meet the wants and needs of the poorer children at school whose wardrobes are already too scantily supplied to afford them comfort and proper protection in cold weather. Nowadays, however, rubber shoes, "gossamer" circulars, and gum coats have become so cheap and common it would seem that even the poorest families should be able to provide such articles of protection for their children.

To perfect the system I have indicated for guarding the health of school-children, and at the same time to cultivate a spirit of benevolence, there should be appointed by the principal or teacher, at the beginning of each quarter, a special committee—to be known as the *Health-Saving Service*—composed of both boys and girls selected from the older and more advanced pupils, and charged with the responsible duty of looking every day after the welfare and comfort of those who need assistance, particularly the little ones. At the close of each week this committee should be required to make formal report of its labors to the teacher or principal, naming the pupils relieved and the particular service rendered in each case. Then, at the end of the school term a handsome premium should be awarded to the pupil who has taken greatest interest in the work, or performed the largest number of acts of assistance.

All examples of exposure of health during school life should be seized by teachers and made the texts of little lectures on the principles of personal, domiciliary, and public hygiene. They should point to the danger to health from wet and cold feet, too violent exercise, sitting on the ground or in draughts when the body is warm and perspiring, excessive indulgence in eating and drinking, insufficient or improper clothing, breathing a bad atmosphere in crowded rooms—all these and every other like impropriety or transgression of the laws of health should be made as plain as simple language and apt illustration can portray them.

It should be impressed upon the attention of school-children that the diseases which kill them in the greatest numbers have been classed by wise men as **FILTH DISEASES**, that small-pox is easily preventable by vaccination, that scarlet fever, diphtheria, typhoid fever, yellow fever, cholera, and even pulmonary consumption, are preventable by cleanliness and correct habits of life, that there are farm-houses in all parts of the country, groups of houses in every community, whole villages, sections of towns, and districts in cities, where slovenliness and filth so much abound that sickness in some form is present at all seasons of the year, that filth does not only infect the atmosphere immediately surrounding its accumulation, but can and does transmit its germs afar, and thus it has again and again happened that whole families, with every apparent surrounding of cleanliness, comfort, and luxury, have sickened and died from infection received through the channel of some drain-inlet, or the medium of the common water supply.

The more surely to fix the memory of these truths, the teacher should employ illustration on the black-board to show dangerous proximity of the family residence, the stable and barn-yard, the pig-sty, the duck-pond, the privy-vault, and the kitchen sink-drain, to the water-supply in the well or cistern. He should also tell how the atmosphere in the house may become poisoned and breed disease from decaying vegetables stored in the cellar, how the milk supply of the family may become contaminated with filth and dangerous to drink, how dwelling-houses, workshops, and factories should be constructed to be healthy to live in and occupy, and how necessary, for the maintenance of good health, that they breathe fresh air, drink pure water, and have plenty of well-cooked, wholesome food.

Besides examples drawn from village and country life, the teacher in the city school may show, by diagrams on the blackboard, the system of sewerage usually adopted in towns and cities, the importance of *traps* to prevent the inlet of deadly gases from the public sewers through the channel of the kitchen-sink waste-pipe, the soil-pipe of the water-closet, and the overflow-pipe of the bed-room stationary wash-stand, the great danger to health from imperfect ventilation of dwelling-houses, school-rooms, theaters, churches, and public halls, the manner of the water-supply, the danger from open cess-pools, the necessity of guarding the public markets and green-groceries, to prevent the sale of tainted meats, stale vegetables, and decaying fruits, and not the least to be dreaded and shunned—public funerals from infectious and contagious diseases.

In the city there are also every-day opportunities to "point a moral" from drunkenness, and from police arrests for various offenses which disturb the peace and good order of society. Such examples should be used to show the penalties and hardships of vice, in contrast with the honorable and lasting rewards of a temperate, virtuous life. To encourage morality and the growth of true manhood, the lives of good men, in contrast with the character of bad men, should be presented for study. For example, liberty-loving Lafayette should be contrasted with that "great bad man," Mirabeau, his fellow-countryman, who had a mind of the highest order, and eloquence the most commanding and impressive, but his commentary on national liberty was personal licentiousness. A look into American history and biography will find the experience of Jefferson in proof that habits of temperance win long life and good health. Then, in English history, it may be seen that Sheridan, with all his oratory and wit, became an outcast from society—a drunken, fallen man. And Savage, and Burns, and Byron—had they not neglected and scorned the plain precepts of temperance, morality would then have had less cause to disclaim the alliance of genius, nor would vice be so readily heard uttering the maxim that its passions are its intellect.

The Story
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and development—*mens sana in corpore sano*

Lord Stanley declared that "sanitary studies belong to the patriot no less than the philanthropist. Don't fancy," said he, "that the mischief done by disease spreading in the community is to be measured by the number of deaths which ensue—that is the least part of the result, as, in the battle, the killed bear but a small proportion to the wounded. It is not merely by the crowded hospitals, the frequent funerals, the destitution of families, or the increased pressure of the public burdens, that you may test the sufferings of a nation over which sickness has passed, the real and lasting injury lies in the deterioration of race, in the seeds of disease transmitted to future generations, in the degeneracy and decay which are never detected till the evil is irreparable."

Lord Beaconsfield also was an active patron of sanitary science, and uttered the sentiment that "the health of the people is the first care of statesmen." Indeed, its objects rank among the most important matters now discussed by the highest intellects and most humane hearts in every civilized country. No jurist questions the right and duty of government to make and enforce laws for the protection of the public health, to secure not only as long a life as nature can give, but likewise as healthy and happy a life as possible.

The State erects imposing and costly edifices for the detention and punishment of criminals, for the education and care of the blind and deaf, and for the treatment of the insane. To support such establishments, with all their necessary appointments, hundreds of thousands of dollars are annually paid out of the public treasury, and the burden of taxation for that purpose is constantly increasing. Why not enact statutes to diminish the factors which furnish such charges to the State?

The law is singularly inconsistent in its protection and punishments. If a man commit murder, he may either be hanged or sent to the State prison for life, but preventable disease—scarlet fever, diphtheria, typhoid fever, small-pox, and other death-dealing agencies—may stealthily enter the household, kill the family, and be innocently regarded as an act of Divine Providence!

The poor pilferer in a dwelling house at midnight may be in a state of starvation at the time he lays a trembling finger on something to eat in the larder, or on a silver waiter on the side-board, but, notwithstanding the pressure and desperation of hunger, if discovered in his trespass and theft, he is sent to prison, and his family disgraced thereby, while the architect, the plumber, and, alike, the ignorant doctor, may enter in broad daylight—aye, even by *call*—and steal and destroy the life and health of the occupants.

The law makes common carriers responsible, regardless of accident, for damage done either to person or property, yet an American citizen may refuse the protection which vaccination affords against small-pox, carry that loathsome disease into a community, and start an epidemic.

If a pitfall be left in the street or public highway, and the citizen, his horse, or his ox, fall into it and

is injured in any manner thereby, he may sue in a court of justice and recover from the town, city, or county, as the case may be, a sufficient sum of money to compensate for the damage sustained, but the same citizen may sicken and disable his own family, also the family of his neighbor, by accumulations of filth on his premises, and escape all legal responsibility.

Again, municipal ordinance says that, in order to avoid injury to persons and property, a locomotive engine and train of cars shall not exceed a speed of six miles per hour within the corporate limits, yet the same authority of law permits open cesspools, filthy streets and alleys, a contaminated water supply to families, and the constant breeding of infectious and contagious diseases to kill the people.

And again, to prevent litigation and strife among her citizens, the State has even gone so far as to prescribe the very words to be used in the purchase or transfer of property by "Richard Roe" or "John Doe." Why not the same particularity and care to prevent the rise and spread of sickness among the people?

Influenced by progressive minds in the medical profession, twenty-nine States have established State boards of health, and it is surely within the bounds of truth to affirm that thereby thousands of valuable lives have been saved, also hundreds of thousands of dollars to the wealth of the States.

The American Public Health Association, backed as it is by the influence and support of the whole medical profession of the United States, is recognized as the great central agency for the dissemination of sanitary knowledge among the masses. Through its systematic efforts and wise administration of voluntary powers, a large public sentiment has already been secured in favor of health legislation, and, accordingly, it has been so done by legislators in many of the States.

I charge you, my brethren, to concentrate your energies and influence. Speak out as one man in the name of the dearest interest of God's children, who look to you—and not unavailingly—for succor in time of their distress. If the medical profession will but remain true to itself—true alike to science and humanity—the time is not far distant when its exalted influence will compel obedience of legislators to public sentiment, and cover every State with statute law for the protection of the public health. Moral suasion may do much to encourage respect for sanitary science, but it requires the strong arm of statute law, with its severe penalties for violation, to enforce obedience to its precepts.

The West Virginia statute provides that "the State Board of Health shall take cognizance of the interests of the life and health of the inhabitants of the State, and shall make, or cause to be made, sanitary investigations and inquiries respecting the causes of disease and the means of prevention." How broad the charge! and how humane and God-like the service which defends men, women and children from preventable diseases! This is precisely the service which a State Board of Health may afford—the education of the people respecting the economic and

political importance of public health, to exterminate and prevent pestilential diseases, and thus largely contribute to the general welfare

During the last decade there has been most gratifying activity in the cultivation and diffusion of sanitary knowledge, and it is an encouraging sign of the times that so much attention is now being given by legislators to the prevention of disease as a duty of the State. The proud lead of the great Northwest States in the cultivation of sanitary science has awakened a general interest in the subject in all parts of our common country. All praise, therefore, to the industrious leaders in sanitary work in Illinois, Michigan, Wisconsin and Minnesota. Little West Virginia, nestled in the mountains, and looking into the near future for the coming time when her inexhaustible stores of native wealth shall be unlocked to hundreds of thousands of busy laborers, has proudly acknowledged allegiance to the goddess Hygieia, under whose health-inspiring banner she has already won substantial victories and benefits for the saving of her citizens. But, while flushed with the stimulus of her triumphs, she turns in sadness, and with outstretched arms and pleading voice, to her elder sisters, by whom she is immediately surrounded, Ohio, Pennsylvania, Maryland, and the dear old Mother State, and says to them, "How long, oh! how long shall the land which the Lord thy God giveth thee be the Paradise of Quacks?"

West Virginia is very proud of that feature of her State Board of Health law regulating the practice of medicine and surgery. Nothing, I am sure, could work more smoothly and consistently with the interest of the public health than its execution as a part of the duties of the Board, and I commend the example of its success to those States that have not yet taken the advanced step to secure higher medical education. This provision of the law strikes at none but those wholly incompetent to assume and discharge the sacred trust of a *physician*. Neither does it attack any so-called *school* in medicine, and the law is most reasonable and just, both to the medical profession and the general public.

From time to time laws are passed to regulate the sale of intoxicating liquors and the dispensing of poisons, to suppress lotteries and gambling houses to prevent the carrying of concealed weapons, to restrain the sharper, the swindler, the robber, and the assassin. Why not, with like propriety, pass laws to restrain the ignorant, and the pretender in medical practice who strikes at both life and purse, who can kill and then invoke the power of the courts to enforce payment for his murderous service? And is it not a ridiculous contradiction to say that a street nuisance which is prejudicial to the public health shall be abated by the power of law, and then with the next breath any man, without due qualification as a physician, may call himself "doctor" and kill his neighbor?

A lawyer, whose practice and mistakes can only affect the purse and property of his client, must undergo examination by learned judges before he can be admitted to the bar. To become a teacher in the common schools, one must pass an examination and

receive a certificate of qualification before he or she can be employed. A pilot on a steamboat, before he can be admitted to the wheel, must learn every crook and bar in the channel—must know the stream so well that he can steer his craft, freighted with human life, as safely in the dark as in the light of day. But such is the inconsistency of law—such the commentary upon unlicensed personal liberty—that in many of the States any man calling himself *doctor* may swing his shingle, and, without the least restraint, prey upon the lives and property of his fellow citizens.

The depreciated value of an American medical diploma is a reproach to the profession, and it is, therefore, high time that the conferring of degrees should be entirely divorced from the department of instruction in medical colleges. This opinion is fully warranted by my own experience as a medical examiner. Not long ago a young gentleman—a graduate of a medical college in "good standing"—came to me for registration, and, to my utter astonishment, he could not answer the question, "What is sanitary science?" Another graduate in medicine, when asked, "What is semeiology?" answered, "A description of the *spermatozoa*."

But the most shameful exhibit, involving the character of a medical college in "good standing," that has come to my knowledge, is shown in the following correspondence:

"MY DEAR SIR. A friend writes me that you propose attending medical lectures. I write to present the claims of —, the medical center of the South and West—the healthiest large city in America—beyond the reach of yellow fever, etc.

"Good boarding, costing elsewhere \$20 to \$25, can be had here for \$12 to \$15 per month. Owing to our —, railroad fare is only half rate. No school has better facilities for medical teaching than the — Medical College. As I am allowed a certain number of beneficiaries from your State (West Virginia), I will take you as one, and charge you only \$50 instead of \$80. With this reduction, cheapness of board, and reduced railroad fare, you can attend one of the best schools for less money than an inferior one. Let me hear from you. Send names of other students. Yours truly,

This letter was a *tablet* copy—probably one of a hundred of the same kind sent out to catch the unwary. It came addressed (by mistake, of course) to a Wheeling physician who had already honorably finished his college course, and from him it came into my hands, as a medical college curiosity. It is without date, but its caption is freely illustrated with the name and picture of the college, and contains the names of the faculty, trustees, and "demonstrators." In order to sound the depth to which "Demonstrator" — might be willing to descend in fishing for students regardless of — a veritable medical student sent him — of inquiry — orthography — or the

Doct—

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of the Best Colleges for Medical Teaching in America and that the Fees are cheaper than some other good Colleges and that suits my circumstance for I am a very poor young man and no matter how much I may know of Theory of Medicine I can't practice in W Va without a Diploma from a good College like the one you have in ——— you offered to take my friend for \$50 dollars and you will do a poor young man a favor if you will take me at the same rate for I have that much money I can pay you in cash as soon as I get there My friend will come with me and we can stay together at the same boarding house the report is here that the yellow fever is in ——— but I am not afraid of any disease for I have had the Small Pox very bad Tell me what books I will have to study at your College and when me and my friend must come We come by ——— I have gone through with Gray's anatomy and the Electric dispensary and midwifery please tell me how long I will have to stay and when I can get my Diploma and if I have to pay extra for it

In haste Yours Respectful

* * * * *

And here is the prompt reply that was sent to this Wheeling student, showing that the style of his English composition was no bar to admission at ——— Medical College

———, AUGUST 20, 1883

Mr ———,

MY DEAR SIR —Your favor of the 18th to hand I have one more special beneficiary to allow, so I will take you on the same terms as I offered your friend Am anxious that your State should have a better representation in ——— than it has had in the past The other information you ask is contained in the catalogue I mail herewith If you begin your medical course this fall, you can graduate February, 1885 That is as soon as any respectable school can graduate you, unless you have already taken a course, There is no place where you can learn more medicine for the same amount of money than in ——— I came here in '77 with a very light pocketbook to study medicine, and, contrary to my expectations, I had a little left after graduating, and was given no beneficiary privilege either

The cushioned seats for our new amphitheater have arrived from the factory They are all numbered, so that students on matriculation reserve their seats for the ensuing session, those matriculating first having choice If you desire a seat near the front, you had better remit me the matriculation fee (\$5), leaving the balance of \$45, and I will matriculate you, select the best seat possible, and mail you your matriculation ticket and number of seat, so when you arrive you will not be crowded back so far that you will be unable to see well the demonstrations and experiments

Hoping to hear from you in a few days, I am,
Yours truly, * * *

This exhibit shows the prostitution of medical college work to base purposes at "the medical center of the South and West" I have made the blanks to hide the identity of the actors in the comedy, because this college has accepted my friend Rauch's

"Minimum Requirements" for a medical college to be held in "good standing," and, no doubt, its faculty are ready to swear by the West Virginia schedule of requirements also! So much for mere promises of reform and a higher standard!

Finally, in exerting my efforts in advocacy of the cause of sanitary progress, I should commit a serious blunder if I neglected to bespeak the assistance and co-operation of the ladies Woman gave Massachusetts the first State Board of Health in the United States, and from that beginning—in 1869—twenty-eight States have followed the example There is yet much work for her to do, and none can do it as well as she, and no cause possesses a stronger claim upon her sympathies and affections As science advances, she gradually acquires her true position in the scale of social life Of the world's inhabitants, 750,000,000 universally hold woman in a state of bondage and degradation, 250,000,000 alone allow her to approach her proper sphere by acknowledging the marriage contract, paying deference to her influence, and promoting her intellectual culture How much had the mind of man to be cultivated before it could give expression to that sweet sentiment of Campbell! —

"And say, without our hopes, without our fears,
Without the home which plighted love endears,
Without the smile from partial beauty won,
Oh! what were man? a world without a sun

A CASE OF PHANTOM TUMOR.

By C N COOPER, M D, BATAVIA, ILL

Mrs W, aged 44, and mother of four living children, consulted me about March 1, 1882, with reference to her expected confinement She ceased menstruation the previous July, but having a slight show in September, since which time there had been no sign of menstruation She is the subject of extreme prolapsus uteri, which for two years has caused the os to present at the vulva whenever she is upon her feet for a considerable time This condition still exists Mrs W is confident that she is pregnant, for she has felt motion for nearly three months, and her breasts have enlarged, appear lively and contain a fluid resembling thin breast milk Her abdomen is not as large as usual at this period of gestation, and sometimes becomes quite small for her At other times the distension appears to be mostly on one side—always the left I informed the patient that she was probably somewhat mistaken as to the time of her confinement I thought it quite possible that her menstrual crisis was upon her, as she informed me that for a year previous to her supposed pregnancy she had been quite irregular as to time, often going six or eight weeks She expected to be confined about the last of April, but the time came and went with no change in her condition During the last week of May, by request, I made a thorough examination to ascertain if possible her true condition The breasts were full, elastic and contained milk The abdomen was considerably distended, covered with $1\frac{1}{2}$ inches of fat, and as resonant as could be expected in the unimpregnated state The left half was more distended and resonant

than the right I found no indication of a tumor of any kind except the distension of the left half of the abdomen, but palpation gave absolutely negative results I could discover neither foetal heart nor placental souffle with stethoscope The cervix uteri was thick, long and elastic The body of the uterus seemed large, but with two fingers in the vagina I could not force it up so as to be felt above the pubis I did not introduce a probe, thinking it barely possible that a recent pregnancy might exist My diagnosis was phantom tumor, though I could not persuade my patient that she was not pregnant

I saw the patient again during the first week in July, when she informed me that although she had previously been mistaken, she was sure the motion she now felt was that of a child, for it was very strong and perfectly natural, except that she seldom if ever felt it when lying down This was ominous, but she confidently fixed the time of her confinement at the first week in September Indeed, her size and every other subjective symptom seemed to bear her out in her idea, yet I did not change my diagnosis During August she suffered much from neuralgia in her sides and back Her urine became scant, and her feet and limbs quite oedematous I prescribed the potassium salts of br iod and acet, also citrate of iron and quinine This treatment gave her marked relief, yet she was becoming very nervous On the night of Sept 2d I was called in some haste, and found her in apparent labor Her pains were severe and expulsive, constraining her to pull with considerable force upon her husband's hands She said her "water broke" early in the afternoon, after a ride of five miles over a somewhat rough road, and was still discharging during some of the pains, which were now coming about every five minutes So natural was the appearance of the labor that I felt with some chagrin that I was the mistaken party, and that, whatever might be the period of pregnancy, it was about to terminate Upon examination, however, I found the external parts moist, but not at all relaxed There was no dilatation of the os, and the cervix was as long and firm as when I examined in May The uterus was also apparently unchanged, and not at all affected by her pains, though the contraction of the abdominal muscles was very strong I at once put $\frac{1}{4}$ grain of morphine into her arm, and gave her 10 grains of pot br and 4 drops of tr gelsemium In a few moments her pain all ceased and she became as flat as she had been since the birth of her last child By palpation I satisfied both myself and her that she had no tumor of any kind I prepared her a mixture of pot br and gel tr, to be given occasionally until my return, and left her sleeping quietly On the following day I found her very comfortable, but weak I directed her to resume her tonic mixture and remain quiet for a week Within a month she had regained her strength and resumed her household duties Her breasts had shrunk away to their natural size, and there was no return of any of the indications which had so long existed

During the first week in October her menses reappeared, and she has since been more regular than at any previous time since the birth of her youngest

child, who is now over four years old I cannot think that this could have been a case of uterine hydatids The uterus could at no time be felt above the pubis The great thickness of fat rendered the examination quite difficult, yet I am confident that the abdomen did not at any time contain a tumor with either solid or fluid contents What the patient supposed to be amniotic fluid was doubtless free limpid urine, unconsciously ejected by the abdominal contractions In other nervous affections patients often pass large quantities of limpid, odorless urine Had there been a cyst of any kind accidentally ruptured, it would doubtless have refilled That she should have mistaken intestinal flatus and muscular twitching for foetal movements is not strange when she supposed herself pregnant The same strong mental impression, doubtless, caused the menstrual suppression It is well known that girls who have been indiscreet and imagine themselves pregnant, sometimes cease to menstruate until they have become satisfied of their mistake In view of all the facts in the case, I am convinced that I was correct in my first diagnosis I attribute the abrupt and final termination of the case to the strong mental impression received in the supposed labor, supplemented, perhaps, by the profound influence of the anodynes given at the time

Batavia, Ill, Oct 18, 1883

MEDICAL PROGRESS

MEDICINE

MOTOR LOCALIZATION IN THE CEREBRAL CORTEX OF MAN —M M Charcot and Pitres (*Revue de Médecine*) have just completed a critical and clinical study of this doctrine and have passed in review, in greater or less detail, 185 cases, of which 36 cases, gathered from various sources appeared to be contradictory to the general application of the doctrine, and which have led them to the following conclusions

1st All the cortical lesions of the cerebral hemispheres in man do not cause interference with voluntary motion, and consequently the cortex of the brain should be divided into two distinct portions, the *non motor zone*, where destructive lesions never produce permanent paralysis, and the *motor zone*, where destructive lesions always produce permanent paralysis in the opposite side of the body

2d The non-motor zone comprises

(a) The whole of the prefrontal region of the brain (orbital lobe, first, second and third frontal convolutions)

(b) The whole of the occipito-parietal region (occipital lobe, superior and inferior parietal lobes)

(c) The whole of the temporo sphenoidal lobe

3d The motor zone comprises only the frontal and ascending parietal convolutions, and the paracentral lobule

4th The paralyses induced by destructive lesions of the cortex take on different clinical forms according to the seat and extent of the lesion Total hemiplegias of cortical origin produced extensive lesions of the ascending 1 paral-

yses are produced by limited lesions of the same convolutions

Among these partial or monoplegic paralyzes we can distinguish

(a) The brachio facial monoplegias, which coincide with lesions of the inferior portion of the ascending convolutions

(b) The brachio-crural monoplegias, which coincide with lesions of the superior portion of the ascending convolutions

(c) The facial and lingual monoplegias, which depend upon very limited lesions of the inferior extremity of the motor zone, and particularly upon the ascending frontal

(d) The brachial monoplegias, which depend upon very limited lesions of the middle portion of the motor zone, and particularly of the middle third of the ascending frontal

(e) The crural monoplegias, which depend upon very limited lesions of the paracentral lobule

5th Whether they are total or partial, the paralyzes produced by destructive lesions of the cortex are permanent paralyzes, which are accompanied after the lapse of a certain time by secondary contractions of the paralyzed muscles and by descending degenerations of the pyramidal fasciculi

6th The irritative lesions of the cortex may give rise to epileptiform convulsions (partial epilepsy, Jacksonian or cortical). These convulsions are ordinarily very readily distinguished from the convulsions of true epilepsy. They commence by a motor aura, and may become general or remain limited to a portion of the body (hemispasm), or to a single muscular group (monospasm).

7th Generally, the lesions that are susceptible of provoking epileptiform convulsions are seated in the neighborhood of the cortical region, the destruction of which coincides with the paralysis of the muscular groups primarily convulsed at the onset of the attack. They may be situated either on the motor zone itself, or on the non-motor zone, and there is not a constant relation between the form of partial epilepsy and the topography of its irritating cortical lesion, as does exist between paralyzes of cortical origin and the seat of the destructive lesions that give rise to them

8th The history of motor localizations in man is founded actually upon the comparison of many corresponding cases, regularly collected, and confirmed, for the most part, by all the desirable guarantees. None of the cases opposed to the doctrine of localizations can stand serious criticism. There does not exist a single demonstrative contradictory observation. The observations which are given as such all fail without exception, either because they relate to complex cases (multiple and diffuse lesions, tumors), or because they are not accompanied by sufficient details

THE SUB-UNGUEAL PULSE.—Dr Henri Gripat in 1873 noted a case of sub-ungueal pulse, which is considered as the first time that this phenomenon has been observed. Dr Gripat tells us (*La France Médicale*) that he has never been able since to observe a

second case, but he gives the notes of the case cited. It occurred in a young patient suffering from rheumatism of long standing, having an old aortic insufficiency, with hypertrophy and anæmia, during an attack of subacute rheumatism. The pulse was regular, bounding, depressible, and could readily be seen in the arteries of middle size, as the temporal, radial, tibial and collaterals of the fingers. On raising the fingers a little, while the hand remained flat on the bed, the blood could be seen passing briskly under the nail and coloring it red, this color disappeared almost immediately and the nail became white in its center, remaining red only at its periphery. The coloration was transient, intermittent, pulsatile and systolic

SURGERY.

CASTRATION OF TUBERCULAR TESTICLES.—M Ch Monod (*Le Progres Medical*), having three cases of tubercles of the testicle in the Hospital Necker, discusses, in his clinic, the question of the propriety of castration. He defines the disease as presenting itself habitually in the form of a subacute epididymitis, ordinarily bilateral, without tendency to spontaneous cure, and going on, after a longer or shorter period, to suppuration. When an epididymitis appears without appreciable cause, without blenorragia, without traumatism, the question of tubercle arises, which becomes more prominent when that epididymitis resists all treatment, and when a limited suppuration sets in without warning at some one point of the organ, and opens spontaneously, the diagnosis is complete. The local phenomena are not always so clearly defined, and it is indispensable that we examine the annexes of the testicle, practicing the rectal touch to determine the condition of the prostate and of the vesiculæ seminales, and examining the spermatic cord. Generally, there is an induration of the prostate, with a greater or less enlargement, being sometimes unilateral and sometimes bilateral. If the prostate be found healthy, we nevertheless penetrate further into the rectum, to examine the vesiculæ seminales. In young subjects, where these parts are in a healthy condition, they are not readily felt, where they are felt, in a case affected with induration of the testicle, it must be admitted that these organs are enlarged, and probably already the seat of tubercular lesion. The examination of the cord shows a tumefaction of the vas deferens, or, when further advanced, a nodular feel, and a more or less marked monoliform condition.

Recognizing the unity of tuberculosis and an elementary lesion which could be removed by extirpation, and thus possibly prevent a general contamination of the organism, M Monod advised castration, thus following Prof Trelat in his views that the suppression of the primitive tuberculous focus was imperative whenever ablation was possible. His answers to objections to this course are, in effect, that as the disease penetrates by one point in the economy, it is not irrational to admit that it is possible to arrest it in its evolution, if it is attacked at its first stage. M Ch Nelaton has cited in his thesis, two cases where, after this operation, the patients remained ab-

solutely cured, without the lungs ever becoming affected. The researches of Cadeau, of Martin (of Geneva), of Prof Richet, and others, have shown that evident pulmonary lesions have retrograded, and, in certain cases, disappeared completely, after the surgical treatment of a local tuberculosis. Prof Verneuil considers that traumatism, in a tubercular case, gives a stimulus to the preëxisting diathesis and hastens death, either by aggravating a pulmonary lesion which, up to that time, was latent, or in causing a development of tubercular meningitis or of general miliary tubercle. Such operations as the cleansing of old abscesses are particularly objectionable, for, in opening the numerous vessels, they may give rise to a veritable auto-inoculation of the disease, to a direct penetration of the parasite of tuberculosis into the organism. M. Verneuil, however, recognizes that there are cases where these complications have not been produced, and does not conclude that it is necessary to abstain from all operations on tubercular subjects, but that a restraint must be put upon the indications for operative interference. To sum up, tubercle of the testicle is not one of those lesions which we should despair of relieving too readily. To the general treatment, recently enriched by new resources, we have joined, under certain reserves, a more active remedy—ablation of the organ itself, thus suppressing the local disease and its consequences.

DEATH FROM THE PRESENCE OF A FOREIGN BODY IN THE ŒSOPHAGUS, NOT DETECTED BY CATHETERISM—M. Lesbros (*Archiv de Med et de Pharm Mil*) gives the case of a soldier who died suddenly from asphyxia after partaking of food. In the attempts to relieve him, instruments were passed down the Œsophagus into the stomach, bringing up chymified alimentary substances, but not detecting the presence of the foreign body. The autopsy revealed a thick piece mostly of aponeurotic tissue, and of such a consistency as not to mold itself to the tube containing it. It was 55 grammes in weight, 8 centimeters broad and 2 thick. In shape, like the three middle fingers pressed together, it lay on a level with the junction of the trachea with the larynx, distending the Œsophagus enormously, and extending some distance up into the pharyngeal space. To account for the failures to recognize its presence, the constrictors of the pharynx in attempting to pass it downwards, must have folded its surfaces so as to form a groove of which the convexity lay against the membranous wall of the trachea, and it was through this groove that the instrument passed.

SUTURE OF THE BLADDER—Prof G. G. Jolliard, of Geneva, (*Revue Medicale de la Suisse Romande*) in operating for ovariotomy tore the bladder, which was adherent to the tumor, transversely 12 centimeters long. He applied the suture of Lambert, taking care not to penetrate the mucous membrane with his catgut thread, so as to prevent its contact with the urine (as in the American suture for vesicovaginal fistula). He took care to turn back the serous membrane for about one centimeter from the two angles of the wound, having noticed that the ves-

cal fluid in the case of experimental sutures generally drained itself through the angles of the wound.

After completing the operation, Prof Jolliard placed a sound in the bladder which remained there six days to prevent any accumulation of urine or contraction of the bladder. After the seventh day, catheterism was less and less frequently performed, until toward the third week there was a complete cure of and return to the functions of the bladder.

The patient died six months after the operation of carcinoma of the liver, and Prof Jolliard found at the autopsy, on the posterior wall of the bladder, the cicatrix, looking like a pearlsh white line, the bladder was perfectly supple and normal, and there were no traces of the catguts by which the suture was made.

TOXICOLOGY AND MEDICAL JURISPRUDENCE

POISONOUS FISHES—Eleven cases of poisoning are detailed, of varying severity, some followed by death, and that very soon after the ingestion of the poison. The symptoms of slight poisoning were mainly referable to the nervous system—muscular weakness, tendency to fainting, numbness, affection of vision of tactile sensibility, and of the muscular sense, which persisted for several days, even for a week. The symptoms of rapid poisoning were an exaggeration of the foregoing, added to which were nausea, gastralgia, abundant biliary and glairy vomiting, death occurring by the progress of a paralysis which attacked the heart and respiratory organs. As the symptoms of instant poisoning, in from ten to twenty-five minutes the subject falls as if suddenly struck down, and loses consciousness, which does not return, although he may live several minutes. The heart loses its force of contraction, and asphyxia is rapid, but no vomiting ensues. In view of the preceding, the writer comes to the following conclusions:

The poison of the genital organs of the tetrodons is a poison paralyzing the nervous centers, which act more or less markedly upon general and special sensibility and upon motility, and cause death by paralysis of the heart and asphyxia.

POISONING FROM HANDLING THE VANILLA BEAN—M. le Dr Sayet gives an interesting communication to the Congress at Rouen on this subject, which is quoted by Dr Genervin, in *La France Medicale*. The vanilla, as we know, is a fruit with its pod, that is smooth, of a brownish black color, and contains a thick pulp, in which are scattered little globular grains. There are three varieties, according to the quality and size—the *prunella*, where the pod is 24 centimeters long, the *chica prima*, and the *basura*, where the pod is very small and the pulp is very fat. The vanilla owes its perfume to the oil which crystallizes on the surface of its needles, which constitute the *glucoside* of *vanillin*, which characterizes good vanilla. It is enveloped in some fatty substance, which prevents the dissemination of the perfume. M. le Dr Savet, the storehouses of least twenty five to

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vanilla enter the port every year, noted certain symptoms which, grouped together, constitute "*vamillism*". In these places, the pods are cleansed, picked over, and classified according to their quality, and these manipulations produce the following symptoms among those conducting the work.

An itching of the face and hands, accompanied with a brisk smarting, the skin is covered with a pruriginous eruption, swells, reddens, and desquamates in a few days. At other times there is a sense of general discomfort, with dizziness, weariness, and muscular pains, which necessitate a suspension of work. The cutaneous affection is caused by an acarus, which has a small, white body, rounded, and found generally at the extremities of the pod. It does not penetrate beneath the skin, but produces prurigo by contact, and its action is increased by the influence of the givre, an irritating substance which aids in the development of the erythema. The nervous affections are most common among the workers of the inferior quality, and may be due to the oily juice which envelopes the grains in the interior of the husk.

OBSTETRICS AND GYNÆCOLOGY.

CONCEPTION DURING AMENORRHOEA.—Dr Andre Petit (*Annales de Gynecologie*) after detailing carefully some twenty four cases, arrives at the following conclusions.

1st If, in the adult woman of normal constitution, there is no menstrual discharge in the absence of the ovaries or of the physiological action of these organs, ovulation, on the contrary, can take place in certain cases without the discharge of blood which is the external phenomenon of menstruation.

2d The cases cited do not furnish an argument in favor of the theory of *disjunction* between ovulation and menstruation. The latter, normally dependent upon ovulation, may sometimes be at fault, when there exists in the woman a local or general cause, which makes it impossible for the uterus to furnish the elements of a hæmorrhage under the exciting influence of the ovary.

3d Amenorrhœa under these circumstances is not an indication of sterility. There exists a large number of cases of pregnancy occurring during amenorrhœa.

4th The physician should seek with the greatest care the cause of the amenorrhœa, to be able to declare understandingly regarding the aptitude for marriage and fecundation of young girls suffering from this affection.

GARTNER'S DUCTS IN WOMEN.—Dr J Kocks, of Bonn, (*Archiv für Gynäkologie*) finds the remains of Gartner's ducts opening close to the posterior margin of the meatus urinarius. A probe of one millimeter in thickness can be passed into them for a distance of from half a centimeter to two centimeters. The openings are generally to be found at the summit of the little lips of mucous membrane which bound the posterior part of the meatus to right and left. Dr Kocks regards them as the homologues of the ejaculatory ducts in the male. Prof Bohm finds

them sometimes taking on diseased action, when they may simulate gonorrhœa. Unless diagnosed by everting the margins of the meatus, and pencilling the orifices of the ducts with solid nitrate of silver, this affection may prove obstinate.

DR OLIVERS'S URINARY TEST PAPERS.—(*British Medical Journal*) These papers are of various kinds, some simple and others compound. The sugar test depends upon the well-known property of indigo carmine being converted into indigo-white in the presence of certain organic matters. Indigotine, the coloring matter extracted from commercial indigo, when brought in contact with oxidisable animal matter in the presence of alkalis takes up hydrogen and is converted into indigo-white, which, in its turn, under the influence of oxygen, is capable of reconversion into indigotine. Dr Oliver has saturated filtering paper with a solution of carmine of indigo, sulpho-indigolate of sodium, a substance which on being heated with carbonate of soda in a solution of glucose or saccharine urine, becomes first green, then red, and finally yellow. The paper is cut into slips about an inch in length and a quarter of an inch in breadth, and these are put up into little boxes with corresponding slips saturated with carbonate of soda. The practical application of the test is very simple. One of the indigo carmine and one of the carbonate of soda papers are dropped into a test-tube and covered with water. A drop of the suspected urine is then added, and the whole is boiled up together over the flame of a candle or spirit-lamp. The color of the indigo-carmine is dissolved out of the paper, and then, if sugar be present, the solution becomes first green, then red, and finally yellow or colorless. On allowing the urine to cool, it absorbs oxygen, and the color is gradually restored. The indigo reaction is given by every form of carbo-hydrate, whilst the copper test is not reduced by all forms of sugar. This, in some cases, will be an advantage, whilst in others it will be found disadvantageous.

The test for albumen is, if possible, still more simple. A little of the suspected urine is poured into a test-tube, and a potassio-mercuric iodide and a citric acid paper are added, when, if albumen be present, a white precipitate almost immediately falls to the bottom of the tube. This test is undoubtedly very delicate, and in one case we obtained the reaction when cold nitric acid gave no precipitate until some minutes later.

THE TELEGRAPH IN MEDICAL JOURNALISM.—The *British Medical Journal*, while complimenting our own *Medical Record*, of New York, upon its journalistic enterprise in providing its readers with telegraphic summaries by cable of the daily proceedings of the British Medical Association during its Liverpool session, shows that it, the *British Medical Journal*, took precedence in this use of the cable, by thus obtaining reports of the progress of cholera in Egypt from eminent medical authorities in Cairo and Alexandria, which were far more extended and elaborate than the reports cabled to the *Medical Record*. We are moving on.

THE
Journal of the American Medical Association.

PUBLISHED WEEKLY

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, DECEMBER 1, 1883

PREPARATIONS OF THE COMMITTEE OF ARRANGEMENTS FOR THE NEXT ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.—It will be seen by the announcement below that the Committee of Arrangements has commenced its work by appointing a sub-committee on essays and papers intended for presentation in the several Sections of the American Medical Association at its coming meeting in Washington, May, 1884. This is a step in the right direction, and at the right time, and the sub-committee is composed of men well qualified for the duties assigned to them. Now, during the colder part of the year, and while the evenings are long, let those members of the Association who intend to present reports, papers or essays on any subject commence their work at once, and push it to completion in ample time to place it, or an abstract of it, in the hands of the chairman of the sub-committee before the first of April, as required by the by-laws given below.

Notify the committee now of what you intend to do, and then carry out your intentions without delay. It is an old saying that procrastination is the thief of time, and we doubt whether all the other thieves combined ever stole half as much in actual value as this one. Let every member who has anything valuable to communicate feel free to offer it, and not assume that there will be so many others prepared as to leave no time for him.

We are confident that the next meeting will be one of the largest and most important in the history of the Association. And if the members will promptly comply with the suggestions of the sub-committee,

the programme of work will be more complete, and the results both in social enjoyment and scientific progress more valuable than have been attained at any previous meeting. The circular of the sub-committee is as follows:

WASHINGTON, D C

To the Members of the American Medical Association —

"The undersigned have been appointed by the Committee of Arrangements a sub-committee on Essays

"It will be the duty of this sub-committee to solicit essays for presentation to the several Sections of the Association at the meeting to be held in this city in May, 1884, to arrange and classify such essays, distribute them to the appropriate Sections, and to prepare, for the convenience of members and essayists, a programme of the papers assigned to the respective Sections.

"The Committee requests those members who may wish or intend to present papers at the next meeting to communicate, as soon as convenient, the full title of their papers.

"It is also desirable that the Committee should be supplied with an approximate estimate of the time to be consumed with the reading of each paper, and an intimation of the day of the session on which its presentation would be most convenient to the author.

"It may not be possible for the Committee to arrange the programme to the entire satisfaction of every contributor, but if the necessary information is supplied in time, it will be enabled to accomplish much towards such an arrangement.

"The Committee hope the publication of its objects and purposes will be sufficient to command the attention of the members of the Association, and that voluntary offers of essays will obviate the necessity of personal solicitations.

"The weekly issues of the journal of the Association present such advantages for the early publication of the scientific work of the Sections, that authors and investigators will find the Sections the best medium through which to communicate with the profession at large. The knowledge of this fact should be a sufficient incentive to induce such response to the requests of the Committee as will enable it to advance the scientific work of the Sections beyond that of any of the previous sessions.

"Contributors are assured that the Committee will make the most diligent effort to promote the scientific interest of the Association, and to that end solicit the co-operation and active support of the members and delegates.

"All communications relating to essays should be addressed to the Chairman, or some member of this Sub-Committee, at Washington, D C

Sub Committee on Essays, { SAMUEL C BUSEY, M D
W W JOHNSTON, M D
SWAN M BURNETT, M D
S O RICHEY, M D
WILLIAM LEE, M D

"Approved and ordered to be published in the journal of the Association, by the Committee of Arrangements

"ALEX T P GARNETT, M D ,

"Chairman Committee of Arrangements "

Extracts from the "Plan of Organization and Regulations Concerning the Presentation and Reading of Essays "

"The Committee of Arrangements † † † shall receive and announce all essays and memoirs voluntarily communicated, either by members of the Association or by others through them, and determine the order in which such papers are to be read and considered "

"It shall be the duty of every member of the Association who proposes to present a paper or report to any one of the Sections, to forward either the paper, or a *title* indicative of its contents, and its *length*, to the Chairman of the Committee of Arrangements, at least one month before the annual meeting at which the paper or report is to be read. It shall also be the duty of the Chairman and Secretary of each Section to communicate the same information to the Chairman of the Committee of Arrangements concerning such papers and reports as may come into their possession or knowledge, for their respective Sections, the same length of time before the annual meeting. And the Committee of Arrangements shall determine the order of reading or presentation of all such papers, and announce the same in the form of a programme, for the use of all members attending the annual meeting "

"No paper shall be read before either of the Sections, the reading of which occupies more than twenty minutes "

"*Resolved*, That no report or other paper shall be presented to this Association, unless it be so prepared that it can be put at once into the hands of the Permanent Secretary, to be transmitted to the Committee of Publication " (Vide *Transactions*, Vol xvii, p 27)

THE AMERICAN PUBLIC HEALTH ASSOCIATION — The eleventh annual meeting of this important organization was convened in Merrill Hall, Detroit,

Michigan, November 13, 1883. The number in attendance was less than at several previous meetings. At 11 o'clock A M, the meeting was called to order by the President, Ezra M Hunt, M D, of New Jersey. A considerable number of new members were elected.

The Treasurer, J Berrian Lindsley, of Nashville, Tenn, reported receipts to the amount of \$4,257 23, and disbursements to the amount of \$2,928 98. The first paper read was on "Cattle Fever," by D E Salmon, D V S, of the Department of Agriculture, Washington, D C. The writer gave at considerable length the history of the disease, more familiarly known as Texas cattle fever. He discussed also its nature and treatment.

The next paper was on "Hog Cholera," or the swine plague, by J M Partridge, M D, of South Bend, Ind, which contained an interesting history of the disease in this country, and a summary of what has been determined concerning its nature, and the means for its prevention.

The Secretary read an interesting paper by W T Belfield, M D, of Chicago, giving the results of recent investigations concerning the nature of the disease known as the "swellhead" in cattle.

During the afternoon session, Surgeon George M Sternberg, U S Army, read an interesting paper on "The Causes and Nature of Malaria"—the supposed efficient cause of periodical fevers. He claimed that there were strong reasons in support of the doctrine that malarial fevers are caused by a "bacillus malarie," but admitted that they were not conclusive.

A L Gibon, M D, U S Navy, read a paper by Surgeon Alfred A Woodhull, upon the "Ætiological Association of Organic Matter with Malaria." The object of the writer appears to have been, to show that the old doctrine of the presence of organic decomposition as an essential element or factor in the production of malarious fevers, should not be abandoned. And he sustained this position by many interesting and important facts.

Surgeon Charles Smart, U S Army, followed with a third paper on the important subject of Malaria, in which he still further sustained the doctrine that malaria is essentially generated in moist soils containing organic matter, and is soluble in the subsoil water, and contaminates the drinking water as well as the atmosphere.

The evening of the first day was occupied with public addresses. Those of welcome by Governor Begole and Drs Wm Brodie and John Avery, were complimentary and appropriate for the occasion, but not of special scientific importance. The address of

the President, Dr Ezra M Hunt, was long, but interesting throughout. It contained a history of the origin and progress of the Public Health Association, and much relating to the progress of sanitary science, with suggestions for future work.

On the morning of the second day, a fourth paper on "Changes in the Types of Malarial Fever in Sumpter County, Alabama, from 1833 to 1883" was read by Dr R D Webb, of Livingstone, Alabama. This was followed by a general discussion of the subject of malaria by several members, and which occupied nearly all the morning session. During the afternoon session papers were read on "Food Supply," by Dr W B Newton, of Patterson, N J, on "Vital Statistics," by A L Gihon, U S Navy, on "The Adulteration of Food," by A R Leeds, PH D, of Hoboken, N J, on "Yellow Fever," by Dr R B S Hargis, of Pensacola, Florida, on "School Hygiene," by Dr Charles J Lundy, of Detroit, on "Physical Culture," by Prof D A Sargent, of Cambridge, Mass, and on "The Eminent Domain of Sanitary Science, etc," by Dr James E Reeves, of Wheeling, W Va. This last paper may be found in full in the present number of the JOURNAL. The evening session was occupied by the reading of an interesting paper on "The Increase of Insanity in the United States, Its Causes and Sources," by Dr Foster Pratt, of Kalamazoo, Michigan. Most of the papers whose titles have been given were well prepared, and contained facts and statements of much importance, but their number precluded any considerable discussion.

The morning of the third day was mostly occupied in the transaction of miscellaneous business and the election of officers for the ensuing year. Two papers were presented and read, however, one on "The Removal of Decomposable Materials from Households," by Dr Rudolph Hering, of New York, and the other on "The Overhead Ventilation of Sewers," by Dr Wm Oldright, of Ontario, Canada.

The afternoon session was opened by the reading of a paper on "The Sanitary Care of Households," by Dr Joseph H Raymond, of Brooklyn, N Y, which was followed by an interesting discussion. Then followed the reading of papers on "Pullman, from a State Medicine Point of View," by Dr O C DeWolf, of Chicago, and on "The Restriction of Small-pox," by Dr J N McCormack, of Bowling Green, Ky. Several additional papers were read by their titles only.

In the evening the Association was addressed on the subject of "Sane Humanity," by Bishop Thompson, of Mississippi, after which the usual complimentary

resolutions were adopted and the Association adjourned. The following are the officers elected for the ensuing year.

President—Albert L Gihon, Washington, D C
First Vice President—James E Reeves, Wheeling, W Va

Second Vice-President—Erastus Brooks, New York

Secretary—Irving A Watson, Concord, N H

Treasurer—J B Lindsley, Nashville, Tenn

From the foregoing sketch of the meeting at Detroit it will be seen that much work was done in a short time, the real value of which cannot be determined until the papers are published in full in the volume of Transactions, which, if we wait the usual period, will be an uncertain time in the future.

We see no good reason why this Association continues to have its regular annual meetings a few weeks after the commencement of the annual courses of instruction in the medical colleges throughout the country. There are certainly some among the eminent members of the profession engaged in the medical schools who are interested in the subjects which engage the attention of the Association. But they cannot, in justice to the classes they are engaged to teach, devote a week to attendance during the college terms.

NEWS ITEMS

THE ANNUAL REPORT OF THE SURGEON GENERAL'S OFFICE, U S ARMY.—As so much of the work done in the Surgeon General's office has come to be of vital importance to the general profession, in the maintenance and preservation of the museum, in the growth and accessibility of the library, and especially in the continued publication of the *Index Catalogue*, a notice of Volume 4 of which recently appeared in the columns of this journal, that it is advisable for the civil practitioner to so keep himself posted upon the views and recommendations presented annually to Congress by that office for its further advancement, that he may use his influence in his individual capacity, and as a member of influential societies, to govern the tone of Congress for the good of the profession. With this object prominently in view, we reprint from the duly press—(*Army and Navy Register*)—the following:

The report of the Surgeon General of the army for the fiscal year ending June 30, 1883, bears no signature, but is submitted to the Secretary of War with the following indorsement by the acting surgeon general, D L Huntington: "The foregoing annual report of the finances and general transactions of the office of the Surgeon General, U S ARMY, was prepared and completed by the late Surgeon General Charles H Cranc previous to his death. It is respect-

fully submitted without his signature to the honorable the Secretary of War."

The balance for the medical and hospital department on hand June 30, 1883, was \$44,821 39, but this sum was covered by previous contracts and obligations, and the greater part of it has since been expended. The balance out of the appropriation for artificial limbs was \$26,330 06. Of the appropriation for appliances for disabled soldiers \$1,778 75 remained. The balance out of the medical and surgical history fund was \$8,534 65. Out of the appropriation of \$10,000 for museum and library, \$2,094 55 remained on hand at the close of the fiscal year. It is recommended that a truss shall be furnished to every one who is ruptured in the line of his duty while serving in the army or navy.

The report states that the cost of supplies for the current fiscal year will exceed the amount expended last year, and it is recommended that Congress be asked to appropriate \$250,000 for that purpose. The monthly report of sick and wounded received at the surgeon general's office represent for the year an average mean strength of \$20,914 white, 2,390 colored troops and 208 Indian scouts. Among the white troops the total number of cases of all kinds taken on the sick list was 37,697, being at the rate of 1,802 per 1,000 of mean strength, an increase of 123 cases per 1,000 over the number reported for the previous year. The total number of deaths among the white troops was 214, or 10 per 1,000 of mean strength. The total number of white soldiers discharged the service for disability was 879, or 42 per 1,000 of mean strength. Among the colored troops the total number of cases reported was 4,689, or 1,962 per 1,000 of mean strength, an increase of 152 per 1,000 over the rate reported for the previous year. The total number of deaths was 26, or 11 per 1,000 of mean strength. The total number discharged for disability was 101, or 42 per 1,000 of mean strength. The total number of cases reported among Indian scouts was 44, being at the rate 212 per 1,000 of mean strength. The total number of deaths was 2.

Diseases of the respiratory organs stand first in numerical importance, of which about 64 per cent are catarrhs of the upper air passages. Extremes of variation in temperature will account in part for the frequency of these diseases, but to a larger extent insufficient ventilation of barracks and dormitories, as well as irregular and unequal distribution of artificial heat during cold weather, must be held responsible.

Wounds, injuries and accidents stand second on the list of causes impairing the effectiveness of the Army. The large number recorded in this class may probably be attributed to the use of troops in mechanical and laborious employments, which form so large a proportion of the soldier's duties. As an indication of the peculiar hardships to which our troops are exposed, the rates of admission for wounds, accidents and injuries are 122 per 1,000 higher than those reported for the German army, and 142 per 1,000 higher than the decennial rate of the British Army.

It is interesting to note that the colored troops make a particularly favorable showing in the small

number of admissions for alcoholism and its results, exhibiting, as they do, a rate of only 4 per 1,000 to rate of 76 per 1,000 of mean strength among the whites. On the other hand, in diseases of the nervous system they have an unexplained preponderance.

The report recommends a thorough revaccination of every individual of the military establishment. This means of preventing the spread of small-pox has proved very effective in the German army.

The report gives an account of a mild epidemic of yellow fever which occurred at Fort Brown, Tex., during the months of August, September, October and November, 1882. Assistant Surgeon W. C. Gorgas, U. S. Army, and Hospital Steward S. W. Reynolds, U. S. Army, contracted the disease. Lieutenant Wenie died on the fifth day after his seizure.

The number of recruits examined by army medical officers and private physicians during the year was 5,964 white, 428 black, and 247 Indian scouts. The total number of rejections was, for white 2,063, for black 131, Indian scouts, none.

The surgical records show only two casualties from actual warfare. The wounds and injuries reported were 5,692. The number of operations performed was 121.

Six hundred and thirty-eight specimens were added to the collection of the Army Medical Museum last year. The contributors to the collection were 9 surgeons, 20 assistant surgeons, 12 acting assistant surgeons, 1 hospital steward, and 49 citizens.

The addition to the library during the past year includes 3,912 volumes and 5,000 pamphlets, making the total number in the collection about 60,900 volumes and 68,700 pamphlets. To supply books required to make the files of the library complete will require an annual appropriation of \$10,000, and it is recommended that this amount be appropriated.

The report again calls attention to the increasing necessity of a suitable fireproof building for the accommodation of the Army Medical Museum and the library.

An Army Medical Examining Board, consisting of Lieutenant-Colonel Joseph B. Brown, and Majors B. A. Clements and J. H. Janeway, surgeons, was convened in New York city on the 1st of March, 1883, for the examination of assistant surgeons for promotion, and of candidates for appointment in the medical corps of the Army.

The names of the candidates found qualified will be reported to the Secretary of War in season for their appointments to be submitted to the Senate when Congress assembles in December next.

There are now 9 medical officers on sick leave of absence, of these, 3 have been found incapacitated for active service and recommended for retirement by Army retiring boards, viz Assistant Surgeon T. F. Azpell, who has been on sick leave since April 7, 1877, J. W. Buell, who has been on sick leave since August 23, 1877, and W. R. Steinmetz, who has been on sick leave since September 16, 1878, one has been recommended to be brought before an Army retiring board, with a view to his retirement from active service, viz Assistant Surgeon J. V. DeHanne, who has been on sick leave since June 22, 1879, and

3 more are regarded as permanently disabled Four medical officers are on ordinary leaves of absence after a tour of duty on the frontier, leaving 162 medical officers for duty October 1, 1883

The medical officers who have died during the year are as follows Brigadier and Brevet Major General Joseph K Barnes, surgeon general (retired), at Washington, D C, April 5, 1883, Colonel Charles C Keeney, surgeon, at San Francisco, Cal, January 30, 1883, Major George P Jaquett, surgeon, at New York City, N Y, October 6, 1882, Captain William H King, assistant surgeon, at Philadelphia, Pa, August 23, 1883, Captain Holmes O Paulding, assistant surgeon, at Fort Sidney, Neb, May 1, 1883, Captain Bernard G Semig, assistant surgeon, at San Francisco, Cal, August 1, 1883, First Lieutenant E D Schue, assistant surgeon at Fort Thomas, A T, October 1, 1882, Captain Joseph H Bailey, assistant surgeon (retired), at Mt Carmel, N Y, April 1, 1883, Captain Henry R Silliman, assistant surgeon (retired), at Philadelphia, Pa, January 1, 1883

The last pages of the report are taken up with the full record of the services of these deceased medical officers

STATE MEDICINE

CONCERTED ACTION BY STATE BOARDS OF HEALTH.

[Reported for the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION]

There has been a growing conviction among leading sanitarians entrusted with the official execution of practical health measures, that while the work of the American Public Health Association is of inestimable value in promoting the interests of sanitary science and sanitary reform, there is a constantly increasing need for an annual conference of State and other health officials, in regard to practical affairs of their every day work, some part of which work cannot profitably be discussed in a public meeting consisting largely of persons not familiar with its details

After due consideration, a meeting of representatives of State Boards was held at Detroit during the recent meeting of the American Public Health Association, at which, after discussion, it was decided to call a meeting of the Secretaries, or other representatives of all State Boards of Health, in Washington, during May, 1884, for the purposes mentioned, and with the view of organizing a Section devoted to State Board work in the present Association, or the formation of a permanent separate organization especially adapted to the needs of State Boards of Health Drs Henry B Baker, of Michigan, and J N McCormack, of Kentucky, were appointed a committee to confer with and secure the cooperation of all the State Boards in fulfilling the object of the meeting, and Drs C W Chamberlain, of Connecticut, J E Reeves, of West Virginia, and Stephen Smith, of New York, were appointed a Committee on Organization, to report at the meeting in May

The American Medical Association meets in Washington in May, and another reason for holding the meeting in Washington is that the representatives of

the State Boards may also have an opportunity for conferring with the Senators and Representatives in Congress from their respective States in regard to national sanitary legislation It would seem that whenever the health authorities of all the States shall meet, discuss and agree upon the course they will pursue with respect to yellow fever, cholera, small-pox, or any disease which endangers public health, without regard to State lines or borders, and whenever all State Boards shall act in concert, considerable progress will have been made in solving the problem of what are the best methods for national action in regard to inter-State and maritime quarantine or inspection and disinfection, as well as in the practical control of epidemic diseases within the several States of this country

SOCIETY PROCEEDINGS

CHICAGO MEDICAL SOCIETY

A very large attendance of members of the Chicago Medical Society were present at the regular semi-monthly meeting, held on the evening of November 19th, for the transaction of considerable important business and hearing a number of scientific essays The President, Dr D W Graham, presided In the absence of the Secretary, Dr L H Montgomery, upon request of the Society Dr James E Henderson acted as Secretary *pro tem*, and subjoined is the report of the proceedings, considerably abbreviated from his stenographic report

Drs Robert H Babcock and W L Copeland, upon recommendation of the Board of Censors, were unanimously elected to membership

Prof E C Dudley, of the Chicago Medical College, read a paper on "The Immediate Operation for Laceration of the Perinæum" He advocated the operation immediately, or as soon after the confinement as possible, and discussed the subject in all its bearings But as we expect to have the paper entire for publication in a subsequent number of the JOURNAL, we omit what would be an imperfect synopsis here The reading of the paper elicited the following interesting discussion

Dr George H Randell was particularly gratified that the matter of faulty and incomplete union of these cases had been brought so prominently before the Society He himself had thought of the necessity for something more than we have gained by the immediate operation, he desired the author to explain more fully the frequency of the transverse rupture

Dr M H Thompson thought possibly it made no particular difference whether the operation was deferred for two days after labor or longer My experience shows that in a much longer time after the operation for laceration than is recommended in the paper, I have placed the knees together, ordered the nurse to keep the parts clean with a douche of carbolized water and taken all the necessary antiseptic precautions I had perfect union in which low I have

obtained, but it occurred irregularly, where perhaps the edge of the mucous membrane would be attached to a quantity of muscular tissue, but the union was firm. I think the patient can be placed in different positions, so long as it is done with gentleness, but I do not understand why it is so essential to keep them on the back, as stated in the paper.

Dr R H Engert—If the laceration is found to be very deep, if it involves the rectum, I do not think a patient should be operated on under two months, and I will ask the author of the paper if he would operate, under any circumstances, immediately after confinement, no matter how deep the rupture? I lately had a case where there was a laceration in three different places, sideways up into the vagina, about an inch into the rectum, and in the perinæum proper toward the right side, and occurred to a woman with the tenth child. In this case I do not think it would have been practicable to perform an operation right after her confinement, as the parts were so much bruised that it would have endangered success in operating. Three months after the labor I performed an operation with perfectly good results, and which have been maintained up to the present time.

Dr E Ingals said It is perhaps presumptuous for me—a general practitioner—to engage in this discussion, for what can I hope to add to that which has already been said, on a subject that has been so fully treated by those who make a special study of gynæcology. Yet I think there are some useful practices relating to the management of perineal laceration that have not been alluded to. I will say in advance that I am conservative in my views, both in the profession and out of it. I do not easily relinquish old practices. I think the profession is inclined to trust too much to things because they are novel, and about which we hope more than we know, and to reject measures whose usefulness has been demonstrated by long experience. The past history of our profession is full of treasures that have been discarded and that he neglected all along its pathway. For many years I have attended such a number of obstetric calls as naturally fall to the lot of a general practitioner. Of course, I have seen a good number of perineal lacerations. I will tell you what I have not done for them and the results. I have not bound the limbs together, I have not required the patient to lie on her side, but have allowed her to take the position that she found to be the most comfortable. I seldom tell her that anything is wrong. If the laceration is extensive I may say to the nurse, "the skin is a little torn, see that the parts are kept scrupulously clean." No woman that I ever attended has had the primary operation performed, nor do I know of one who has had it done secondarily. I do not believe that any one of them would have been benefited by either operation. I can recall but a single case that required anything except cleanliness. This was a primipara, in whose case a severe labor and instrumental delivery resulted in extensive laceration. The wound did not heal kindly, and I stimulated the granulations by a few applications of nitrate of silver. She has since borne a number of children in rapid

succession, and has had excellent health. I have cases of laceration that have remained under my observation twenty-five years, and they have experienced no trouble from it. I have had no case that I think would not have been injured by the primary operation. This operation must give the patient some shock and inconvenience, and it may increase her septic dangers, and all this when she is just emerging from the pangs and perils of labor. One-half of the cases of confinement in Chicago are attended by midwives, and I do not suppose any of them have this operation performed. I have consulted a number of the older practitioners of this city, and they all manage their cases just as I do mine and are rewarded with like results. We should not forget how well the lacerated perinæum will do when left to the reparative processes of nature alone. I am embarrassed in not being able to assent to the teachings on this subject of eminent gynæcologists, but I should feel that I had done less than my duty, if I neglected to say a word in behalf of the poor women who bear our children.

Dr J H Etheridge at this point asked the doctor—you say you never saw a case benefited by the operation? Answered—No case that I have ever attended in my own practice, but if the laceration is very extreme, and consequent prolapsus has occurred, then no doubt the operation would be beneficial. No case in my own practice, primarily, I am sure—and so far as I know, secondarily—has been benefited by the operation.

Dr L A Harcourt—My own experience has been rather limited, but for seven or eight years, I think, I never met a case of rupture of the perinæum. I said to some of my neighbors, physicians, I have never in my practice had a case of this kind. I was cautioned to examine my patients after confinement. Heeding this caution, and examining them carefully, I found quite a number, and for the past three years I have operated in every case where I was permitted, what might be called the immediate operation. In some cases, I delayed 20 hours, not longer, and in every case, union by first intention was obtained. The gentleman preceding me spoke of the fear of alarming patients by telling them a serious accident has occurred. It is not my practice to tell a patient in a way that would alarm her. I have practiced the method spoken of in the paper, of paring the edges of the laceration, and I always use the deep sutures, passing them completely beneath the laceration, this, with good care, and the patients have all recovered. I have had only one case of "central laceration," which occurred eight years ago. The labor was quite easy, the child was small, and I was astonished to find a laceration. On examination next morning, I found a small perforation, closer to the vaginal outlet than to the rectum. In that case, I did nothing but use a mild application of nitrate of silver, so as to favor healing of the wound, and it proved a success. I think the danger of septic poisoning is overestimated. A year ago last March, I was suffering from inflammation of the eyes, and was called upon to attend a woman in confinement. The child was very large. The head was born without any rupture to the peri-

næum, the cord was twisted around the child's neck, and I made an attempt to draw the cord down, so as to save the child from strangulation. Pains came on suddenly, the body was forcibly expelled, and tore the perinæum through entirely, the anterior half for three-quarters of an inch.

I was in no condition to perform an operation, and summoned a brother practitioner, who kindly consented to do so for me, if the patient would not object. Her friends, however, refused, she neglected every precaution in regard to cleanliness, and yet the woman made a good recovery. She came to me afterward, and complained that she could not retain fecal matter, but appeared to be in good health. Now, that was a most favorable case for blood-poisoning. All the surroundings were most favorable for it, no measures were taken to keep the parts clean. I am therefore in favor of the immediate operation in almost every case, for my own all resulted favorably.

Dr T P Seely—My experience is, in succeeding to produce good results, simply by placing the patient on the side, fixing the limbs together, closing the parts and keeping them in apposition for a few days, and observing strict antiseptic precautions, and I would like to ask the author, while I am on the floor, why he places the patient on the "dorsal decubitus" during the operation, as I do not understand how he fixes the patient afterward.

Dr Dudley, in closing the interesting discussion, of which the foregoing is a résumé, said, relative to the frequency of the transverse rupture of which one member asked, that he was unable to answer positively. Within the past year, however, he has seen at the Mercy Hospital four or five cases of this kind, also, that he had met with two cases in private practice. I am, therefore, inclined to think this form of rupture is quite common. Thinks incomplete central rupture of the perinæum is the form which most often occurs, have noticed cases in which central rupture had occurred, and in which the posterior commissure had not been ruptured at all. Under these circumstances the rupture is always overlooked, unless very careful examination is made with one finger in the vagina and one in the rectum. If Emmett's idea is not very much the best, then the basis of it may rest in the fact that in incomplete rupture the transverse variety is the most ordinary form. I do not know whether this is the case, but when that form of rupture occurs the perinæum divides in front so that the parts go to either side, and the shape of the wound is like the letter T, as was stated in the paper. Moreover, I do not mean to say positively that after contraction of the cicatrix, that it will be a cause of a smaller perinæum, but it may be a possible cause, and as one of the speakers asked, if I would operate within two days after laceration occurred? I can reply by stating yes, or sooner, and if not called sooner I should operate on the strength of my experience. I prefer the dorsal position, with the thighs flexed and a small roll placed under the knees. This is the best position for the patient. There is no objection to placing a patient on the side if she again will assume the dorsal position, and the patient generally finds the latter

the easiest. I always place a bandage around the knees and legs to keep them constantly in the same position. My experience in the primary operation for complete rupture through the sphincter and muscle is confined to one case, in which union occurred. Apparently, the union of the perinæum was pretty good, but not as good as if a better operation had been performed, there being a slight recto vaginal fistula left. The patient has had several children since. I think I will make this statement in general, that I would operate in every case of ruptured perinæum, especially if the rupture involved the deeper structures of the vaginal portion, but where rupture occurs through the sphincter and muscle, in a majority of cases union does not take place, although cases of this kind are on record in which union of this sphincter has occurred. There are cases in which the internal sphincter muscle has been equal to the retentive needs of the patient. Regarding the needle to be used, the one used by Thomas, Emmett and others, is the straight one. The reasons for preferring it are the following. A straight needle can always be introduced in such a way as to know where the point is if you know its length. The curved needle is much larger and makes a larger incised wound after every suture. The straight needle is perfectly round, and makes a punctured wound, and, again, *per se*, there is an unnecessary amount of damage done with a curved needle. This central transverse rupture is one in which it is difficult to see how the parts can be kept in contact by tying the knees together. The tissues retract afterwards, and tying the knees together would have no influence at all unless with the vaginal portion of the wound, neither would sutures passed through the cutaneous surface of the wound—only sutures passed in the axis of the vaginal outlet could, under these circumstances, bring that torn tissue down to the place from which it was torn.

A paper on Glycosuria was next read by Dr Oscar C DeWolf (see this paper) published in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, Nov 24th, 1883. Discussion upon this very important subject was deferred until the next meeting.

Dr F E Wadham was to have presented a paper on "Nerve-Stretching" for the relief of an obstinate case of sciatica, but the late hour precluded its being read.

The resolutions presented at the last meeting regarding "The Nucleus of a Medical Library" were taken from the table, and Dr Edmund Andrews said, "the formation of a medical department in the public library, accessible to every family physician in the city, is a greater public necessity than the duplication of a vast number of novels." The result of the conference with the public library board was that the books would have to be presented and not loaned to the library. This Society would incur no expense in taking care of them. He moved, therefore, the passage of the resolutions reported at the last meeting, and that \$500 be appropriated for the purchase of books and journals, which was easily carried, also that a committee of three on Library be now appointed by the society. *resol* Dr E Andrews,

F C Hotz, and O C DeWolf forming the committee for three years, two years, and one year each, in the order their names appear. Dr J G Kiernan wished to have a committee on Medical Legislation appointed, as many of the laws relating to our profession in this State are in a very unsatisfactory condition. Particular reference was made to the confidential relations between physician and patient, and the former's appearance on the witness stand, as any member of this Society may be compelled to reveal the secrets of a patient. For this and similar reasons he offered the above suggestion in the form of a motion, to determine what measures are needed to remedy existing laws on this subject. The motion was unanimously carried. The chair announced that he would appoint the committee at the next meeting.

Another motion made and seconded that we do now adjourn, was also unanimously carried.

L H M

BOOK REVIEWS

TRANSACTIONS OF THE MEDICAL AND CHIRURGICAL FACULTY OF THE STATE OF MARYLAND AT ITS EIGHTY-FIFTH ANNUAL SESSION, HELD AT BALTIMORE, MD, APRIL, 1883. 8vo 302 pp.

One of the most interesting parts of this volume is that which treats of the growth and development of the library, and the address of Dr John S Billings on Medical Bibliography, which has already been published and commented upon. The report of the Library Committee shows a valuable addition of new and recent works, the number of volumes in the library reaching 3,346, with 108 journals received regularly, and also shows an interest in the older examples of medical literature, with an interest in medical portraits, old diplomas, and other material which, while it is no longer of much practical value, represents the history and progress of the profession very satisfactorily. Our institutions are still young enough to make it possible to secure these records, at the expense of some effort—and old enough to make them scarcer and more valuable every day. The report of the Committee on the Directory for Nurses in Baltimore does not appear to be very encouraging. This city of 332,190 inhabitants (census of 1880) finds use for only 29 nurses, male and female, outside of its hospitals, who were employed 55 times, and the revenue of the Directory was \$111.41 for 11 months—which represents the age of the Directory.

Dr Richard Henry Thomas gives, as the report of the Section on Practice, the result of four and a quarter years of observation on the influence of season and weather on the death-rate from diphtheria in Baltimore. His article is illustrated by charts, which give the curves of relative humidity, temperature, velocity and direction of wind, rainfall, and the correspondent prevalence of diphtheria throughout the year, and he concludes that the weather has an important bearing upon the rise and fall of the violence of the disease, temporary changes having but little effect. The conditions favorable to a rise are, a low barometer, low winds, especially from the east,

high temperature with high humidity, and heavy or continued rainfall. The conditions favorable to a fall are, high winds, especially from the west, low humidity with high temperature, or high humidity with low temperature, and (generally), a high barometer.

The report of the Section on Materia Medica embraces observations by Dr John S Lynch on the antipyretic effect of carbolic acid, and on the astringent influence of *rubus procumbens* in diarrhoea and dysentery.

Dr Wm T Howard, in the report of the Section on Obstetrics and Gynæcology, discusses vesico-vaginal and utero-vesico-vaginal fistulae, with reference to cases. In the report of the Section on Psychology, Dr J W Chambers gives seven cases of nerve-stretching for the relief of sciatica, with perfect and almost immediate relief in five, partial relief in one, and no improvement in one, which was operated upon twice.

Dr H Clinton McSherry furnishes us the report of the Section on Ophthalmology, Otology and Laryngology, the details of two cases of laryngeal stenosis, and discusses the treatment, with full illustrations to the text, of the special apparatus required.

The Direct Action of Ethyl Alcohol upon the Heart, by Dr H. Newell Martin, is a plain statement of interesting physiological experiments, and, what is rare in physiological work, they are easy of comprehension. Dr Martin complains that the immense literature upon the subject, comprehending 160 titles in the Index Catalogue of the Library of the S G O, is of very little use, that the so-called experiments with alcohol are usually with a little alcohol plus a good many other things. He concludes that blood containing $\frac{1}{8}$ per cent by volume absolute alcohol, has no immediate action on the isolated heart, $\frac{1}{4}$ per cent diminishes the work done within a minute, $\frac{1}{2}$ per cent may reduce amount pumped out by left ventricle to so small a quantity as not to supply the coronary arteries. This is due to influence on the elasticity of the cardiac muscle, to a lowering of its tone, either by direct combination or by influence upon its nutrition, possibly direct. These experiments were performed directly upon the heart. To produce such effect through the stomach, much more alcohol would have to be injected, that is, equal to $\frac{1}{4}$ per cent of the total blood in the animal.

Dr C W Chancellor, under the head of Sewerage of Cities, gives a long and interesting description of Siemen's pneumatic system, as applied in the city of Luxembourg. Dr I D Arnold gives two cases illustrating some forms of laryngeal phthisis. Dr S C Chew gives the notes of a case of dextrocardia. Dr S McLane Tiffany, in giving the details of an operation for the removal of the upper jaw, discusses the advantages of the prone position during operations upon the jaws, and of semi-narcotizing the patient with opium or one of the alkaloids before administering the anæsthetic. Dr Philip C Williams reports three instructive cases of malarial fever in puerperal women, where the diagnosis was gravely embarrassed. The list of membership in this Society embraces 216 names.

TRANSACTIONS OF THE COLORADO STATE MEDICAL SOCIETY, AT ITS THIRTEENTH ANNUAL CONVENTION HELD IN DENVER, JUNE, 1883 8vo, 122 pp

From the list of members published in these transactions, it would appear that the Colorado State Medical Society has 109 active members to do its work, and from the paper by Dr Jesse Hawes, entitled *Charlatanism in Colorado*, it would appear that a large part of that work has been to expose and get rid of quacks and impostors, which it seems to be doing quite effectually. The President, Dr P R Thombs, takes as the theme of his annual address, "The Neuropathic Diathesis, or Insane Temperament and its Management by the State," in which he emphasizes the necessity for State laws governing the sexual commerce of such, in or out of wedlock, by forbidding marriage of a certain class, and quarantining effectually the victims. Dr R G Buckingham gives a report on Obstetrics, in which he refers most particularly to his own practice and experience in cases of difficult labor. Dr Edward Rivers in his report on Ophthalmology gives an interesting résumé of the progress of to day. The *Bacillus Tuberculosis* is discussed by Dr Charles Denison, and this followed by two interesting articles—one by Dr S Edwin Solby on Climatology, in which he discusses temperature as influencing climatic change, and the other on the Analysis of Signal Service Statistics with reference to Colorado Climate, by Dr Samuel Fisk. Dr J W Collins reports a Case of Uterine Stricture. Dr Geo W Cox discusses Areolar Hyperplasia of the Uterus, and in considering the means of diagnosis, he recommends the passing of the whole hand into the vagina under the influence of an anæsthetic, which practice he applies to virgins as well as to married women. Dr J J Macdonald shows a symptom of the infection now pervading medical societies, by breaking out all over in verse, in a poem replete with variety, puns and rhyme.

DOMESTIC CORRESPONDENCE

HAY FEVER.

In the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION of October 13, 1883, is published a paper on Hay Fever, by C Hixson, M D, of O'Fallon, Illinois.

As the writer says, "I have been a sufferer from hay fever for twenty-five years," and that "my opinion is that those who cure hay fever have never seen a genuine case, but have mistaken it for a case of common cold," I think it is time that he should hear from one who, like himself, has "sat up of nights in order to get a modicum of sleep."

I prefer to call the disease summer catarrh, as I believe the dust from hay, like the pollen from rag weeds, is only one of the causes of that peculiar disease.

If the doctor, when he says no one can cure hay fever, means such a cure as will ever after secure the

patient from another attack, perhaps he is right, but if he means to state that is not amenable to such cure as are intermittent and remittent fevers, then I think he has "during the last twenty-five years" not swallowed the right "half of the *materia medica*."

As I have suffered from hay fever thirty-seven years, just twelve years longer than Dr Hixson has, I shall take it for granted that I know what the disease is, and therefore waste no time in describing the frontal headache, the stuffed feeling of the nose, nor the number of handkerchiefs I have made ready, in a given time, for the washerwoman, nor the nights, seventy-two hours long, I have "sat up" because I could get my "modicum of breath" in no other position. But to the treatment.

When a sufferer finds that an attack of summer catarrh is approaching, I would have him take from 15 to 20 drops of the tincture of opium and 15 grs of iodide of potassium. He should repeat the tincture of opium every hour until the headache, the choriza and the tightness of the chest are relieved. This will generally occur after the second or third dose has been taken. Then have him take 15 to 20 grs per day of sulphate of quinia, divided into three doses and taken after meals with 10 grs of iodide of potassium. These last remedies should be continued two or three days, or until all the symptoms of the disease are removed. If the symptoms for which the tincture of opium were given recur, it should be repeated in full doses as often as required. When I say full doses I do not mean, the so many drops of the *materia medica*, but the quantity sufficient to allay the symptoms for which the opium is administered. Last night I took 100 minims of tincture of opium in two doses for what I believe to have been my last visit of hay fever until next July—possibly until August or September. To-day I visited my patients as usual, and to-night I am writing this letter.

And now I come to the most unpleasant part of my duty, as I take no pride in the facts which the truth compels me to state. Twenty years ago I was advised by a medical friend to smoke tobacco for my infirmity. I took his advice. During the first ten years after I began my evil habit I very seldom had to resort to opium, quinine and iodide of potassium. Since that time the tobacco smoke has lost some of its potency, but the other remedies named never fail.

I hope when Dr Hixson reads this paper he will not say he has tried all of them with no benefit, until he tries them in the quantities, and in the order stated. Of course, if he prescribes opium to a new patient, it is not necessary for me to suggest that he must gradually explore his way to such patient's opium capacity, which often lies far beyond the maximum laid down by the authorities.

Such is the treatment of summer catarrh, by which I have made life tolerable in one of the most annoying diseases which affects the human body. If Dr Hixson's case has not become an outlier to *materia medica* I hope to hear a good report from him.

S S BOYD,

DUBLIN, IND

STRICTURE OF THE ŒSOPHAGUS.

MR EDITOR

No 16 of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION contains an interesting article on "Stricture of the Œsophagus," etc, that reminds me of the following case

One year ago Mrs A D Peebles, of near Shelbyville, Ill, was taken with puerperal convulsions, and had three or four M D's called. According to Mr Peebles statement she was compelled to swallow pure, undiluted chloroform. In about three weeks after her confinement she had great difficulty in swallowing solid food, and in December last I was consulted and diagnosed stricture of the Œsophagus, and selected gradual dilatation, but they (Mr and Mrs Peebles) objected. I explained to them the use of the bougie and the danger of her disease, but some of their friends (?) insisted on their consulting a physician in Decatur, which they did, and was treated for "spasm of stomach."

I requested Mr Peebles to write me, after his removal to Kansas, which he did, and the following letter will explain itself. Respectfully yours,

S HARVEY LAMBERT

Assumption, Ill, Nov 2, 1883

TWIN FALLS, KANSAS, June 16, 1883

DR S HARVEY LAMBERT

Dear Sir—I will take the liberty to write you a few lines, as I believe I owe you an apology for not writing to you as per agreement, about my wife's illness. Last winter her case developed into one of well-marked stricture of the Œsophagus. She thought of coming back to see you about it, but she got bad so fast, and it was so far to come. We tried all the doctors out here in this county, but got no relief, so I took her to Kansas City, Mo, to Drs ——— and ———, Surgeons of Kansas City Medical College. They passed a bougie down the Œsophagus, commencing with small ones and increasing until they passed six different sizes.

She had not swallowed any solid food of any kind, not even as large as a pea, for three months and four days. But after the first operation she could swallow thickened soup, and after the second she could swallow almost anything she wished.

Dr ——— said the stricture was caused by some very strong medicine given her last fall, during that spell of sickness she had. She stayed six days the first time, and went back once since and stayed two days at Kansas City. She is now about well. She was operated on once a day by the doctors.

Yours truly,

A D PEEBLES

ALL the European Powers have signified their adhesion to the proposal of the Italian Government to summon a conference at Rome, with the object of making sanitary regulations, and drawing up an international sanitary code. Signor Maricini, Minister for Foreign Affairs, will shortly address a circular to the Powers on the subject.

MISCELLANEOUS

CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING NOVEMBER 24, 1883

Kennedy, Stephen D, Medical Inspector dismissed the service by sentence of a general court martial

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM NOVEMBER 16, 1883, TO NOVEMBER 23, 1883

Moore, John, Lieutenant Colonel relieved from duty as Medical Director Department of the Columbia (G O 29, Department of the Columbia, November 8, 1883)

Brooke, James, Major and Surgeon relieved from duty at Angel Island, California, and assigned to duty as Post Surgeon, Presidio of San Francisco, California (Par 1, S O 162, Department of California, November 14, 1883)

Horton, Samuel M, Major and Surgeon leave of absence, granted October 20, 1883, extended three months (Par 7, S O 266, A G O, November 20, 1883)

Bache, Dallas, Major and Surgeon assigned to duty at Fort Adams, R I (Par 5, S O 215, Department of the East, November 19, 1883)

Williams, John W, Major and Surgeon granted leave of absence for one month on Surgeon's certificate of disability, with permission to leave the limits of the Department (Par 5, S O 157, Department of the Columbia, November 12, 1883)

Town, F C, Major and Surgeon until further orders to perform the duties of Medical Director Department of the Columbia (G O 29, Department of the Columbia, November 8, 1883)

Munn, Curtis E, Captain and Assistant Surgeon assigned to duty at Fort Warren, Massachusetts, (Par 4 S O 216, Department of the East, November 20, 1883)

Winne, Charles K, Captain and Assistant Surgeon relieved from duty at Fort Winfield Scott, California, and assigned to duty as Post Surgeon Angel Island, California (Par 1, S O 162, Department of California, November 14, 1883)

Appel, D W, Captain and Assistant Surgeon granted two months leave of absence (S O 68, Division of the Atlantic November 16, 1883)

Cochran, J J, First Lieutenant and Assistant Surgeon assigned to duty at Fort Bayard, N M, (Par 5, S O 236, Department of the Missouri November 15, 1883)

Richard, Charles, First Lieutenant and Assistant Surgeon relieved from duty at Fort Adams, R I (Par 3, S O 216, Department of the East, November 20, 1883)

Wilson, George F, First Lieutenant and Assistant Surgeon to report in person to Lieutenant Schwatka, 3d Cavalry aid-de camp, for temporary duty in connection with the completion of report of recent expedition to Alaska (Par 3, S O 156, Department of the Columbia, November 9, 1883)

Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY

VOL I

CHICAGO, DECEMBER 8, 1883

No 22

ORIGINAL ARTICLES

DENUATION, OR EROSION, OF THE TEETH.

BY JOHN S. MARSHALL, M. D., CHICAGO, ILL.

[Read to the Section on Oral Surgery of Association June 1883.]

MR. PRESIDENT AND GENTLEMEN

The subject to which I desire to call your attention is one that is still under controversy, and my object in presenting this paper is to review the opinions that have generally been entertained as to the cause of the disease, and emphasize, if I can, more fully than has yet been done the objections to these views, and then recall to your minds an explanation of the cause of the disease which has not heretofore received the attention it has deserved, viz, electro chemical action.

The terms denudation and erosion are derived from the Latin, the *first* meaning "to lay bare," or "the condition of a part deprived of its natural covering, as a part denuded of its cuticle or mucous membrane, a bone of its periosteum, or a tooth of its enamel." The latter term means "to eat away," or "to be gradually destroyed by the action of some corrosive agent." It is often used in the same sense as ulceration. (Duglison.)

Various terms have been applied to this disease, such as denudation, erosion, abrasion, surface wear, and atrophy.

Denudation or erosion of the teeth is a disease which attacks these organs, beginning with the enamel and gradually involving the subjacent dentine, without any of the appearances or characteristics of dental caries. It consists of a gradual wasting away of the enamel and dentine, generally upon the labial and buccal surfaces, most often beginning with the incisors, though it may attack other teeth first, and may involve all of the teeth to the second molars. It usually begins at the gum, forming cavities or grooves, which follow the curves of the gum lines. They are as evenly and smoothly cut as though made with a file or disk, are highly polished, perfectly hard and many times absolutely free from discoloration.

The surface of the groove is generally quite sensitive, sometimes exquisitely so, causing the patient much uneasiness and pain. Occasionally the process begins at numerous irregular points on the labial surface, which extend, and after a time coalesce, involving the loss of the entire enamel wall of this surface. The disease progresses, in rare cases, as far as the pulp, leaving that organ bare, while in the majority nature provides against it by filling up the pulp

chamber with secondary dentine and thus protecting it from exposure.

In other cases, after progressing to a more or less extent, it seems to become self-arresting.

The rapidity with which the disease progresses is also variable. In some cases the loss of substance will be so slow as to require ten, fifteen or twenty years to reach the pulp chamber, in others only a little more than as many months. The superior teeth are much more liable to be attacked than the inferior, though cases are quite common in which both are affected, but I have never seen the lower teeth destroyed to the same extent as the upper.

John Hunter was the first to notice this disease, and he described it about a century ago. He named the disease "Decay by Denudation," and thought the disease was inherent in the tooth itself, and stated that he had seen cases where it appeared as if the outer layer of dentine had been destroyed first, and that the enamel afterwards broke through for want of support.

This theory is evidently erroneous, for no such phenomenon occurs in this disease. He has doubtless confounded it with that form of caries in which the enamel becomes partially decalcified in spots, and permits the pathological condition to extend to the subjacent dentine, when after a time they break away together, leaving a shallow cavity more or less irregular in form, but lacking that smooth, polished condition which always attend a case of true denudation or erosion.

Bell dissented from the views of Hunter, but expressed himself at a loss to explain the cause of the disease. He suggested, however, that the cause might be one of faulty development of certain concentric portions of enamel, which would render such portions more liable to mechanical abrasion, or other injury, than the rest.

If such were the true explanation, we should expect to see the grooves extending completely around the necks of the teeth, but this condition never occurs, and yet certain portions of enamel may, as he states, be faulty in their development, but not necessarily, however, extending completely around the tooth, and thus predispose such teeth to the action of solvent agents, as is believed to be the case in dental caries.

Fox, in writing upon the subject, frankly admits that he is at a loss to give a cause for the disease, but thinks it some solvent action of the saliva upon the enamel.

all the surfaces of the teeth equally affected, for they are always more or less in contact with it. The inferior teeth are completely bathed in the saliva, so that if the suggestions were correct, the lower teeth would be most often affected, while clinical experience teaches the very opposite of this.

Wedl describes the disease and classes it among the atrophies, but makes no attempt to account for its peculiar manifestations. He calls attention to the fact, however, that sometimes the mucous membrane of the cheeks and lips is raised into a fold opposite the dental arches, and suggests that it may be well to consider in future cases whether any relation exists between the defects upon the necks of the teeth and these folds or ridges.

These folds or ridges I have noticed many times, but they are by no means a constant accompaniment of the disease, and when such instances have occurred, I have been inclined to consider it a result, rather than a cause of the disease.

Salter calls the affection "surface wear," and ascribes it to friction of the lips, cheeks and tooth-brush.

The surfaces of the teeth attacked are those usually reached by the tooth-brush, and by many the disease is thought to be one of mechanical origin entirely, but this cannot be the case, for often the grooves or cavities will reach around the teeth mesially and distally to points impossible to be reached by the tooth-brush, or by folds of the mucous membrane of lips or cheeks.

The break in the tissue is also, in some cases, so decidedly undercut as to prove conclusively that such a condition could not have been caused by the friction of the tooth-brush. Tomes also observed a case of the disease where the patient rarely or never used the tooth-brush, and Mr. Harrison reported a similar case at the meeting of the Otological Society of Great Britain, in May, 1870. But the most conclusive argument against the mechanical origin of the disease was furnished by Dr. Muric, in a paper read before the same society at its meeting held in June, 1870, in which he related the fact of having found a sea lion (*Otaria jubata*) whose teeth showed the results of this disease to a very considerable extent. The positions most notably affected were the sides of the teeth, where friction would be reduced to the minimum.

The tusks, or great cuspids, were most conspicuously affected by the disease. Tomes thinks this condition, "at least in so marked a degree, is not common among seals, but has seen an approach to it in the teeth of several specimens of different species," and he further says, that in the museum of the Royal College of Surgeons may be seen a skeleton of a seal in which this condition of the teeth is well exemplified, some of the teeth being deeply grooved in positions not exposed to friction.

Magitot regards the disease as a result of caries which has been spontaneously cured or arrested by the obliteration of the dentinal tubuli.

I cannot understand how this author, for whom I have the greatest respect, can arrive at such a conclusion from the phenomena presented by the disease.

If, as he suggests, it is caries in the incipient stage arrested or cured by the obliteration of the tubuli from a deposition of calcareous matter, why is it that in almost every case, the teeth thus affected are sensitive, some exquisitely so, to the touch of an instrument, changes of temperature, acid condiments and confections? Calcified nerve tissue has no sensation (assuming that nerve fibrils penetrate the tubuli of the dentine), hence his theory in this respect must be erroneous. These cases are also usually progressive, many times extending over a series of years, and perceptible changes can be noted from time to time.

To illustrate, the model I show you is the cast of the mouth of a gentleman living in Chicago. The case I consider a very remarkable one. You will notice the six anterior teeth and the right first bicuspid of the upper jaw are quite extensively denuded, the enamel being entirely removed from all of the teeth named, upon their anterior surfaces, with a considerable portion of the dentine, leaving an inclined plane pointing backward, and extending from the margin of the gums to the ends of the teeth, shortening the anterior teeth to the extent of about a sixteenth of an inch.

The denuded surfaces, you will notice, are not all grooved in one direction, the central incisors and the left lateral are grooved horizontally like all the others, but are also grooved longitudinally at the cutting edges. The first and second bicuspid of the lower jaw on the right side are also affected, but not to the same extent as those of the upper jaw. Fifteen years ago Dr. Allport of Chicago, filled with gold the six anterior teeth upon their cutting edges, for the front teeth originally occluded squarely, and by mechanical abrasion, cup-shaped cavities had been worn into the dentine, making it necessary to fill them. The centrals were also slightly decayed at the margin of the gums, and small fillings were also inserted there.

Nine years ago it was first observed that the disease had attacked the teeth, two years later it had progressed so far as to make the edges of the fillings stand out above the surrounding tissue on the labial surfaces. These edges were rounded off, and the case dismissed for the time being. Shortly afterwards the gentleman went to Europe, and remained there four years. On his return not a vestige of the fillings was left, or even a depression to indicate where they had been, the surface being as smooth and regular as though cut and polished with file or disk.

There has also been a perceptible loss of structure during the last three years, but the destruction has been much less rapid than previously.

Numerous other cases might be mentioned to substantiate this position, as well as the fact that it does not originate in incipient caries. Cases have occurred in their incipency, and progressed stage by stage under our eyes, and at no time have they shown any signs of decay.

In the case just mentioned two of the teeth were slightly decayed at the gum line, but none of the others were at any time affected in this way.

The late Dr. E.

ported some years ago a case in which erosion had attacked natural teeth that had been set upon an artificial piece in precisely the same manner as the teeth having natural attachments to the alveolus

Tomes and Harris are both inclined to think the disease is one of chemical origin. Tomes suggests that it is caused by the fluid secreted by the mucous membrane, covering the parts affected, undergoing fermentation or affording a nidus for fermentation, and thus may provide an acid solvent

Harris adopts the opinion that the loss of substance which characterizes the affection is produced by the action of acidulated buccal mucus. In every other part of the mouth this fluid is mixed with saliva, and the acid it contains so diluted as to prevent it from acting on other portions of the teeth

The view held by these authors is the one most generally accepted, I think, perhaps, because no better theory has been advanced. This theory, however, does not account for all the peculiarities of the disease. To illustrate, certain teeth are affected in individual cases to the exclusion of others. I have seen several cases where the disease attacked the superior incisors and bicuspid while the canines were entirely free, and *vice versa*, and one marked case of the disease in the lower bicuspid on both sides, while all the other teeth of the mouth escaped entirely

I have frequently tested these cases with litmus paper to ascertain the condition of the mucous secretions of the lips and cheeks, but have never found any very marked acid reaction, in fact, have often found greater reaction in mouths where the teeth were entirely free from the disease. In looking for the views entertained upon the causes of this disease I found also an article translated from the German by C. E. Koch, and published in the *Missouri Dental Journal*, August number, 1872, in which the author—who failed to sign his name—advances the theory that the disease is one having a close analogy to the process of resorption, attacking the roots of the deciduous teeth prior to their being replaced by the permanent organs. He claims that “the gum may secrete a fluid endowed with functions similar to those possessed by the absorbent organ found at the roots of the deciduous teeth, and by this means the tissues are removed, leaving the surfaces as in the case of the roots of the teeth just mentioned, smooth and polished,” but qualifies his statement by saying that he “feels inclined to assume at least a predisposition of the tooth concerned, for the reason that in all cases only certain teeth are attacked by it.” He bases his argument, however, upon what he assumes to be a fact, viz “that denudation always appears upon the neck of the tooth.” He has evidently overlooked the fact that cases of the disease occur, as we have already stated, upon the labial and buccal surfaces remote from the margin of the gums, at points not likely to be reached by the eroding fluid in sufficient strength to account for the rapid progress of the disease in some of these cases

Garretson thinks the true explanation of the cause of this disease has been but recently enunciated in the experiments of Mr. Kincely Bridgman, the author of the electro-chemical theory of decay

Garretson says his present convictions have led him to believe that in this direction will be found to lie not only the cause of the disease, but the prophylaxis. He further says “It would seem however, that back of the immediately acting cause must be a predisposition, here it would seem to be the result of impressions made on the enamel at the period of its formation, and which deficiency the nutritive functions have failed to correct. It might indeed, very well be that such enamel is entirely deficient in vital resistance, and thus subject to be acted upon as any inorganic structure, being by electrolytic action simply dissolved.”

I have called your attention to the opinions of all the most eminent dental pathologists who have written upon this subject, from John Hunter down to the present time, and have stated what seemed to me to be the objections to their views, but I fear we are not much nearer a solution of the problem than when we began. I am, however, very deeply impressed with the idea (as expressed by Prof. Garretson,) that in the electro-chemical theory of decay of Mr. Bridgman seems to lie the solution of the problem

The case recorded by Dr. Eleazer Parnly had all ways been a mystery to me until I studied Mr. Bridgman's experiments, and since that time I have felt that here was possibly the explanation, that it was of electro-galvanic origin, the plate and the teeth forming the elements of a battery, and the buccal mucus, which is of slightly acid reaction, in contact with the labial and buccal surfaces forming the acid medium by which the current was established and maintained. Now, may we not carry this thought a little farther, and apply the theory of Bridgman to this disease?

The tooth, invested at the root by vital tissues, is rendered electro-positive, thus forming the positive element of a battery, the air surrounding the crown or exposed portion renders that electro-negative to the root, and forms the negative element, or, in other words, the tooth is polarized. The only thing now needed to establish an active current is an acid fluid, and that we have almost constantly in contact with the labial, buccal and approximal surfaces of the teeth, at just the points where the disease manifests itself

A piece of metal, when polarized, is positive at one end and negative at the other, neutrality being reached at the center. In the case of the copper wire in Bridgman's experiments, only that portion of the wire exposed to the atmosphere was rendered negative, no matter how much or little was exposed, and the neutral point was reached at that portion protected from the action of the atmosphere. The greatest loss of substance of the copper wire was at the surface of the fluid (dilute sulphuric acid) or where the fluid and the atmosphere came in contact, and beneath the fluid there was no action at all. We argue, therefore, that, like the copper wire, the tooth will be acted upon most vigorously at the junction of its two poles, provided there is an acid medium like the buccal mucus to establish and maintain the electro-chemical action. By this action the lime salts are removed at the line of junction between the atmosphere and the tissue, and washed

This theory also explains one of the very common and at the same time peculiar phenomena of the disease, viz the under cut condition of the grooves at the border nearest the gum. It is a law of electricity that the main current always flows from the positive to the negative pole, and that the positive element is most readily acted upon and soonest destroyed. The same laws govern like conditions in the mouth. The root of the teeth being positive, and the crown exposed to the atmosphere (and not protected by fluid) negative, the greatest waste would be towards the root or positive pole, and as soon as the gum line was nearly reached the external surface would be protected by the fluid always present at this point, and the loss of substance cease, while the other portions toward the root would be acted upon with the original intensity, and thus in time would occur the under cut condition.

There is one other factor, however, entering into this problem, which must not be overlooked, viz vital resistance, and it doubtless must exert a powerful modifying influence over electro-chemical action, for observation has taught us all that teeth of the best organization have stronger vital resistance than teeth poorly developed. This is illustrated by the marked difference with which these teeth yield to the ravages of dental decay.

I have also noticed that the teeth most often attacked by denudation, or erosion, are those that are generally classed as medium or soft teeth, low in vital resistance, the patient often inheriting a peculiar cachexia, the scrofulous or syphilitic, which has had a depressing influence upon the developmental process, thus lowering the power of vital resistance, and predisposing the teeth, as well as other organs of the body, to the ravages of disease.

This seems, to my mind, to be the most rational explanation of the cause of this affection that has yet been promulgated, and if I have been able to throw ever so little added light upon this question, I shall have succeeded in my undertaking.

DISCUSSION

Dr G. H. Goodwillie. Had Dr Marshall any opportunity to inquire into the previous history of the case described?

Dr Marshall. In the case of which the cast was shown there was probably inherited syphilis. The pulps of all the teeth were alive. Treatment consisted in cutting off a small portion of the surface towards the palatine wall of each of the incisors, without exposing the pulp, and fitting a ring to which a cover of platinum, very thin, was attached, forming a cap, to this cap a porcelain crown was soldered, and the whole cemented to the stump of the tooth with oxyphosphate. The cuspids being only slightly affected, were not interfered with, but the probabilities are that in time they will have to undergo the same treatment.

Dr Goodwillie. There is no doubt that the structure of the teeth is often affected by certain diseases. By the marks which they leave on particular portions of the tissue, we can almost tell at what time the in-

jury was wrought, and what it was that caused the disturbance. Syphilis, small-pox, whooping cough, scarlet fever, and the pustular diseases have each their characteristic marks, by which we can tell at what portion of the eruptive period their influence was felt.

Dr L. Buffett, Cleveland, had just a word to say. If the destruction of tissue in the disease under discussion is to be accounted for by the electro-chemical theory, it is to be borne in mind that it is only because this action places the tissues in condition to be acted upon by an acid, which, at bottom, does the real work of destruction.

Dr Jacob L. Williams thought the theory advanced by Dr Marshall quite plausible. He remembered in this connection a remark his preceptor, Dr Keep, used to make regarding galvanic action in the mouth—he called it animal galvanic action—and that was with reference to the frequent similarity of the points of attack on opposite sides of the mouth. This statement of Dr Marshall's puts it in a more scientific shape.

Dr W. P. Horton, Cleveland. Dr Marshall propounds a new theory to explain the cause of erosion, and makes out a very good case. In the present instance, he says there was underlying it all a syphilitic taint. Now, the question is, is there any limit set to the period within which the poison thus introduced may set up the acid action which causes the destruction, or may it not be antidoted by medication at the proper time?

Dr Marshall. Did I understand the question to be, was there a specific deposit among the crystals of the forming tooth that would in time develop an acid?

Dr Horton. The acid or its cause must be inherent in the system. Can it be eradicated?

Dr Marshall. I did not say it was an acid. That is what I want to find out. I do not think the taint will develop an acid that will cause this disease. I do think that it lowers the power of vital resistance so that by and by, when the exciting causes come into play, the tooth tissue is more readily dissolved than it would have been had the vital resistance been normal in tone.

Dr Goodwillie. The causes of this disease are either local or constitutional. Syphilis is the virus of viruses. If vitality is so impaired that nature has not the power to assert herself and throw off the influence, some day there will come an evidence of the impression. He has seen the primary, secondary, and tertiary stages developed within a year, and again the primary and secondary would develop within a year, and the tertiary would not show itself for twenty years afterward. He instanced the case of a child five years of age, the father of which had contracted syphilis eighteen or twenty years previous, and afterwards married. The first child of the union was alive, the second and third were dead, the mother was dead, and this child was the first fruit of a second union. He had to remove the whole of the upper jaw. If the child had had vitality enough to go on to maturity before the symptoms were developed, we might have had such marks on the teeth as those in the cast shown by Dr Marshall—we cannot tell,

but it couldn't throw off the taint, hence came the operation described. We never know when the vice of syphilis has left the system. As to local exciting causes it may be acidity, it may be galvanic action.

Dr Horton. The question I asked was, was there not some definite point during the construction of the tooth when nature's processes were interfered with by some specific element. Dr Goodwillie says there was a disturbing element, and we have the marks of the interference on the teeth themselves. Now, is there any period within which this interfering element performs its work of disintegration. My opinion is that the local disturbances arise during the period of formation of the teeth. My experience is that the development of the denudation may occur at any age—at from sixteen to twenty-one, or from thirty-five to forty,—the last is the most usual age.

Dr Marshall thought Dr Horton mixed the constitutional and local causes. In my paper I distinctly stated it was more apt to occur in the mouths of patients who have suffered from the inherited form of syphilis, have seen it in patients as young as sixteen years of age, but in most cases they are above thirty.

Dr Horton. Would denudation be apt to occur if the patient were inoculated with syphilis after he had arrived at manhood?

Dr Marshall. I do not claim that syphilis is the exciting cause of the condition under discussion. It is simply a predisposing cause.

A CASE OF AMAUROSIS DEPENDENT UPON DENTAL IRRITATION

REPORTED BY W. W. ALLPORT, M.D., D.D.S., CHICAGO, ILL.

[Read to Section on Oral Surgery, June 1883.]

Mrs L., aged 34 years, of nervo-bilious temperament, and fairly good health, called, in May, 1879, for an examination of her mouth. Found the left first superior bicuspid tooth decayed upon the distal surface, but not so extensively as to expose the pulp, or sufficiently near to it to require, in my judgment, special protection. The cavity was filled with gold and the case discharged. In April, 1881, one Sabbath, I was called in great haste to see the patient at her home. The tooth which I had filled had become suddenly very sore, with great pain in the left eye. The patient then explained to me as the reason she had not visited me for a regular examination, as had been her custom every three or four months, a serious difficulty with the left eye, involving partial loss of sight, profuse lachrymal discharge, and severe paroxysmal pain.

Upon examination I resolved to remove the filling, and did so at once. The history is as follows:

For several weeks after the tooth was plugged there was a slight uneasiness in it, with sensitiveness upon sudden changes of temperature, such as were produced by taking hot or cold drinks into the mouth, but nothing so marked as to require, in her judgment, any attention, and these symptoms finally passed away. In about six months after the operation upon the tooth she began to experience pain in

the left eye, of intermittent character, increased flow of tears and some slight obstruction of sight. Being in New York soon after the appearance of the trouble, she consulted one of the most eminent ophthalmologists of that city, who, after a careful examination, said he "could discover no local cause to account for the difficulty, and therefore it must be of constitutional origin, though obscure." He prescribed constitutional treatment, as he said "to build up the system."

After faithfully carrying out his instructions for some weeks and getting no relief, she called upon him again for another examination, the result being the same as the previous one, and the constitutional treatment continued.

On returning to Chicago she consulted one of the leading ophthalmologists, who also said he could find no local cause, and that it must be of systemic origin.

The symptoms for months had grown gradually more aggravated, so that she had been obliged to give up reading and writing, as all such efforts would aggravate the symptoms.

In this condition she again visited New York, for the purpose of consulting her oculist, feeling sure that as her general health was good, there must be some local trouble with the eye that had been overlooked. After a third careful and most painstaking examination, he said he could find no sufficient local cause for the symptoms complained of, and that he could do nothing for her, except what might be hoped for through constitutional treatment.

The history of the case was so remarkable, that I was led to make a most thorough examination of her teeth on her first visit to my office after the removal of the filling, and on percussing the tooth that has been referred to, found it slightly tender, and as this was the only tooth manifesting the slightest abnormal condition, I resolved to ascertain the condition of the pulp. On excavating the cavity, I found the bulbous portion of the pulp chamber filled with secondary dentine quite up to a line corresponding to the edge of the alveolus. Above this I found a living pulp in a state of low inflammation. As the instrument pierced the pulp the sensation was communicated to the eye, causing a paroxysm of pain. The patient then stated that since the removal of the filling the pain in the eye had been much less, and the soreness of the tooth was considerably relieved.

After removing the pulp, which I did at once, and treating the tooth for a few days, the pulp canal was filled with oxychloride of zinc cement, and the crown cavity with oxy-phosphate. The case began to improve at once, and in a few weeks the sight was restored to its normal condition, and all the other symptoms had passed away.

Dr Williams. We often see deposits of secondary dentine where the action seems to be natural. At other times we find it accompanied by an inflammatory action. This case is unique, in going on to fill up the tooth with a secondary deposit to so great an extent without the trouble being discovered or suspected.

Dr Buffet. In this case there was very little irritation of the tooth—not sufficient to cause special

pain This you will find true—that in all cases of reflex trouble with the branches of the trifacial, the local trouble will be a low-chronic inflammation, even if it is at one time acute, this will pass and it will become chronic. We must look closely for very slight manifestations, it is an error to look only for the greater lesions. Dental nodules are among the most difficult troubles to diagnose. In different individuals we have dental irritation in full manifestation, and the opposite, depending largely upon temperament. Those of full habit need depressants, and those of low habit require tonics.

Dr Butler. The case is of great interest not only to specialists, but also to the general practitioner, low or slight manifestations is one of the best evidences that it is the result of a chronic rather than an active irritation. Where it goes on slowly we get amaurosis through reflex action. In a case of amaurosis under the care of an oculist in the city, the patient had two superior incisors with decay extending very near the pulp. The irritation kept up and the sight got no better. He (Dr Butler) made a careful examination of the mouth, and came to the conclusion that the trouble with the eyes was aggravated by the condition of the incisors. He removed the morbid tissue and treated the teeth, and in a short time the eyes improved under the treatment of an oculist, who admitted that placing the teeth in proper condition had been of great assistance.

Dr Brophy thought that an attempt to save pulps which were partially sloughed off or in a state of chronic inflammation was a mistake, and there was often risk of leading to such complications as had been described.

Dr Marshall. One fact which such cases emphasize is that the general practitioner should not ignore a thorough examination of the teeth in arriving at the cause of these reflex troubles. Often the teeth are not looked at by them. Cases may be named of neuralgia arising from irritation of a pulp treated for malaria, the trouble being discovered only on a visit to a dentist. That was one reason why he was in favor of teaching dental surgery in the medical schools—that the general practitioner might have a better idea of dental diseases and their ramifications than he has to-day.

MAJOR AMPUTATIONS AND HOT WATER DRESSINGS

BY H. H. CLARK, M.D., DANVILLE, ILL.

[Read to the Tri State Medical Society.]

MR. PRESIDENT AND GENTLEMEN.—Amputation of the thigh or of the arm at the shoulder rank as the most fatal of surgical procedures. The causes of this fatality we shall not stop to consider in full, but simply enumerate such as are specially presented in the cases we bring to your notice to-day, and to which our treatment was specially directed, namely, shock, hæmorrhage and gangrene. I enumerate them in the order of their frequency as occurring in these cases. Shock, more or less severe, is always present. Hæmorrhage, in some form, is not infrequent, and gangrene occasionally presents in civil practice. To

prevent these, or they having occurred to abridge their severity, is ever a foremost consideration of the surgeon.

The latter fact has induced me to pursue in all cases of surgery, of whatever magnitude, the treatment to which I would to-day call your attention—hot water applications. And that I may the better illustrate its value, I have selected only my gravest cases, which I will now lay before you.

G. W. K., male, æt 30—Gunshot fracture through upper third. Missile conoidal, cal 44, entered at lower angle of Scarpa's triangle, passed directly through, implicating nerve and artery and badly comminuting femur. Amputation half an hour after receipt of injury. Operation by lateral flaps, bone cut just below trochanter. Hæmorrhage had been very great and the shock was profound, and three hours after amputation he presented the appearance of a man dying of cholera. During the three hours a constant oozing of blood had been going on, until the dressings were completely saturated. Close bandaging had no effect. Cutting the sutures, I opened up the flaps and applied sponges saturated with hot water, which was kept up for one hour. The wound was then closed, hot water dressings applied until complete reaction, which occurred sixteen hours after the operation. Primary union took place, and he was discharged with a perfectly healed stump, on the 12th day of November.

Robt Reich, March 22, 1865, was caught by driving belt and thrown against a four-foot circular saw making 400 to 500 revolutions per minute. The saw entered at the lower border of left trochanter major, passed obliquely across to origin of tendon of internal vastus muscle, leaving a part of the latter muscle and a little integument intact. The femur was badly comminuted, and the muscles and integuments torn into shreds. After the first great gush of hæmorrhage there was but little loss of blood. The shock was very severe. When I first saw him, at 1 o'clock A.M., March 23rd, he was almost pulseless, and complaining of agonizing pain in the injured limb. Stimulants and morphia had been given per os, but seemed not to affect him. After injecting three-fourths grain of morphia hypodermically, and giving freely of ammonia and spirits frumenti for one hour without any perceptible change, and believing the pain was the cause of the continuance of the shock, and that the only relief to be had was to remove the large mass of lacerated nerve tissue exposed to the air, I decided to amputate. A hurried consultation with Drs. Schaffer, Eagleson and Williams negatived disarticulation at the hip as certainly fatal, and as the muscles and skin were entirely cut away on the outside of the limb as high as the trochanter, I resorted to the following as the only hope of closing the wound.

Passing the knife in on the outer side of the femoral artery, on a line transverse with the lower border of the trochanter major, I cut squarely out over to the trochanter, carrying the incision down to the bone, and around the limb, until I came to the point where the knife would have emerged had it been carried through from the starting point. I carried the

knife through on inside of femur, emerging at posterior point of first incision, and formed a flap from the tissues on inside of the thigh. The saw was applied obliquely across from the middle of the lesser to great trochanter, and just enough bone removed to form a smooth surface. The lower sharp angle was then slightly rounded off. The difficulty now was to close the wound, with but one flap, and it no greater than is ordinarily formed when we have ample tissues to work with. I overcame the difficulty by cutting out a good part of the muscles, and so letting the remainder fold more squarely down across the stump.

While ligating the arteries, an anomaly of size was noted, the femoral being about as large as a No. 7 or 8 sound, American scale, whilst the gluteal was fully the size of a No. 16 or 17. The ligature upon the latter did not come away until the thirty-fourth day. Primary union on anterior angle, a small slough at posterior, followed by much suppuration, healed in about five months. Five hours after the operation he had completely rallied from the shock and partook of a very fair amount of food, thus corroborating my conclusion as to the pain being the cause of the severe and prolonged shock. I show you a photograph of the results in this case. I only made the amputation, Dr. Schaffer, of West Salem, Ill., had the subsequent care of it.



November 13, 1876, Wm. Paten, æt. 19, scrofulous habit. Four years ago was kicked by a horse upon the right tibia. Abscess of bone followed, involving the head of the tibia, opening into the joint and eventually destroying the articular cartilages. Patient very feeble. After a short tonic course amputated above the condyles on November 13. His recovery was very rapid and satisfactory, he being able to go to the table for meals, three weeks in primary union throughout.

H. L. æt. 26, December 27, 1880, right arm crushed under locomotive engine about three inches below shoulder. Saw him at 2 A. M., arm almost separated from the body. Hemorrhage very great, but had ceased when I reached him. Shock severe. Stimulants and morphine, operation at 7 A. M. Having fallen upon his back, the flange of the wheel had impinged upon the front and axillary surfaces, tearing

away all the soft structure as high as the anatomical neck, while the posterior soft structures of the arm and shoulder were almost pulpified by the pressure to which they were subjected. Forming a flap from the bruised posterior structures and trimming the anterior as closely as possible, I disarticulated and closed the wound, at 3 P. M. he had fully reacted and was resting comfortably. On the night of the 31st was restless, had severe pain in wound. New Year's morning there was a gush of blood, and cold pressure was applied, opium given freely, could not bear the cold, so it was removed. At 9 P. M. the patient promised well, his only complaint being about the amount of pressure. Slept from 10 P. M. to 1:30 A. M., when he awoke suddenly and cried out "I am bleeding!" In five minutes I was by his side, to find him almost pulseless. I instantly applied my fingers to the subclavian, ordered stimulants, and sent for assistance, which arrived in about twenty minutes, Drs. Kimbrough and Taylor responding very promptly. Notwithstanding the contused condition of the tissues union had proceeded very rapidly. Believing that these tissues would slough were I to ligate the subclavian where it emerges between the scaleni muscles, I opened the wound, cleared out the clots and began my search. The ligature upon the axillary artery remained firm. Examining carefully, I found the tissues in the posterior part of the axillary space very soft and sloughy, and easily broken down and moved by the finger. Having cleared every thing out I directed Dr. Kimbrough to remove his pressure from the artery, when a clear jet followed from a point well back under the edge of the scapula, which being secured proved to be the subscapular, a ligature was applied close to its origin and pressure removed. After carefully cleansing, the wound was closed. Union mostly by granulation. He was discharged with wound entirely healed in ten weeks from receipt of injury.

December 17, 1882, C. K., mule, aged 13, had right ankle crushed by loaded coal car, at 10:30 A. M. Hemorrhage continued until syncope occurred, reaction followed by amputation just below tubercle of tibia at 2:30 P. M. Reaction from shock of operation was imperfect, and on the morning of the 30th gangrene was fully developed and had reached above the patella. By use of treatment to be given farther on, a line of demarcation was established, and amputation by oval flaps was made at middle of the thigh on the 9th of January. There was considerable suppuration, but in two months he was about on crutches. A fistula still exists at intra-angle down to the bone, which is slightly roughened. He is very strong at this date.

December 27, 1882, Ross Gallion, a farmer, while assisting to capture a tramp, was accidentally shot through the left thigh, the weapon being a smooth bore rifle loaded with bird shot known as No. 4. As will be seen by the pathological specimen shown you the shot entered on the front of the limb, at junction of lower and middle third, passing slightly outward, backward and downward through the limb, shattering the femur, and severely lacerating the soft structures. Thirty shot + the and were for

in the clothing on their removal by the surgeons who were called at the time, as many more were removed from the wound, and nearly as many more remained embodied and entangled in the tissue, and were found while removing the section of femur presented here to-day. From the history given me by Dr. Jones, of Covington, Ind., reaction was prompt, quickly followed by severe inflammation. In view of this latter fact, and that if performed the amputation would have to be high up, a conservative course was decided upon. The limb was put up with weight extension and local short splint. After a thorough trial the patient became intolerant, and they were removed, and the limb from this time to the date of removal was supported on pillows. July 3, six months from date of injury, the following conditions existed. Aside from emaciation and weakness, the patient's condition was favorable—i. e., stomach and bowels and kidneys acting normally. The local conditions were, a very much swollen limb filled with abscesses and sinuses, with a profuse discharge of pus, that was steadily sapping the strength. The tissue had that peculiar cork-like feel of long continued subacute inflammation, indicating grave defects in nutrition of the parts and consequent lowered local vitality.

This local condition involved all the parts of the thigh as high as the trochanter. Every few days a small bit of bone would be discharged from some one of the numerous sinuses, always being preceded by an attack of fever and increase of the pain, the latter being continuously present in some degree. Taking into consideration the great exhaustion, the constant discharge of pus, the frequent appearance of bony structure in the discharge from the wound, the constant and peculiar pain, the three latter facts coupled with the known opening of the medullary canal, giving undoubted evidence of the presence of periosteal and osteomyelitis and the large amount of structure involved.

The two last being extensive, as evidenced by the condition of the soft tissue close to the coxo-femoral articulation, and the direction upwards of two of the sinuses, a more unfavorable case for operative procedure could scarcely be conceived, especially so as amputation seemed the only one available, and as the only possible chance for recovery. Being a farmer, it was especially desirable that sufficient stump be left for the attachment of artificial support, and with this object in view, and lest it might prove impossible in consequence of the disorganized state of the bone to secure such, the following plan was mapped out and acted upon. To amputate just above junction of middle and upper third, flaps to be oval, and formed midway between a lateral and an anterior posterior flap operation, and saw through the femur. After having the arteries secured, had it been found that the periostitis and osteomyelitis had so damaged the bone as to render its retention inadvisable, an incision from the outer angle of the flap was to be carried up over the trochanter and the remaining section of the femur removed by disarticulation. This was found unnecessary, as the medulla seemed quite healthy, and the periosteum firmly adherent. Seven vessels were ligated, and torsion used upon nine more. A good

deal of trouble was experienced in securing the profunda artery, in consequence of the softening of its coats and adhesion to surrounding structures. From examination of section of the femur shown, you will observe that it was not cut squarely across. This very non-surgical appearance was caused by the hard brawny condition of the soft structures preventing the square application of the saw, no reasonable amount of force sufficing to draw them away from pressure against the back of the saw.

This unyielding condition also rendered the closure of the flaps quite difficult, but by use of very deep sutures and firm pressure with the hands it was satisfactorily accomplished. Drainage was effected by the ligatures being brought out at both angles. There was very little discharge after the fourth day. Union, primary, took place, and the 23d of July he was virtually discharged from supervision. Three weeks subsequently, during a fit of despondency over his helpless condition, he suicided by shooting himself through the head.

We now come to the treatment. Having secured against further loss of blood I endeavor to relieve the shock by application of hot water to the arms, legs and abdomen, applied by flannel dipped in water at 125° to 140° F. Having obtained reaction and performed the amputation I apply water as hot as can be borne by the hand, or about 150° to 160°, using sponges, alternately draining water into and by pressing the saturated sponges directly into the wound. After all bleeding has stopped so fully that the flaps can be handled without inducing any oozing, the flaps are stitched home. During the process of closing the hot water is kept draining into the wound freely, so as to keep it clear of all clots and render the contraction of all vessels as perfect as possible. Treated in this way the tissues become so supple that the most perfect coaptation is effected, and as it were almost glued together. Small cavities or pockets can hardly occur, and the chances of clots forming and becoming a nidus for abscesses, or from decomposition causing septicaemia, is almost annulled.

After closing the wound the water is applied in gradually decreasing temperature until it is applied cold, and until this point is reached no other antiseptic is used, and then it is only applied by means of a piece of muslin, dipped in carbolicized water, loosely wrapped around the stump. Adhesive straps or bandages are not applied until removal of the sutures, except in cases where, from unavoidable deficiency of flaps, the strain is too great upon the sutures. In conjunction with the hot water applications, morph hypodermically, spts frumenti and ammonia are made use of until reaction is fairly set up, after which they are laid aside. In the case of amputation at the shoulder, upon breaking up the adhesion, the hæmorrhage from small vessels was very profuse, but was readily and permanently controlled in two or three minutes by pressure with sponge saturated with hot water. In the case of the boy, Kilpatrick, who suffered from gangrene and was exhausted to such a degree that a very moderate loss of blood would have proved fatal, Esmark's bandage

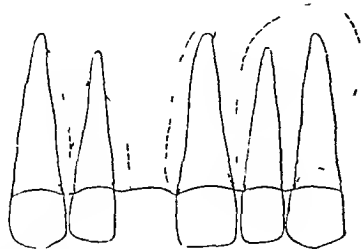
and tourniquet, with hot water flooded into the wound, secured the patient with a loss not to exceed two ounces. Along with hypodermic injection of nitrohydrochloric acid and a forty per cent carbolyzed oil into the gangrenous tissues, as close to the living structure as possible, hot water was for three or four days kept constantly trickling over the parts, until a perfect line of demarkation was established. In this, the only case I ever used them, I inserted two drainage tubes, and in reviewing the course of this case I believe they proved a drawback, as the wound united everywhere else by primary union, except where the tubes were inserted. From these points suppuration continued for nearly three months, and at one point a small sinus still exists. As a preventive of septicæmia and pyæmia, I can only say I have never seen an indication of either in any operation where I have used hot water, nor have I ever had an abscess form in the stump, but in view of the results which I have obtained I believe, if properly applied, it will take a fair rank with other, at present, more popular agents.

A REMARKABLE CASE OF PYORRHOEA ALVEOLARIS, WITH REPRODUCTION OF BONE, OCCURRING IN THE PRACTICE OF DR ALLPORT, CHICAGO, ILL.

REPORTED BY DR JOHN S MARSHALL, CHICAGO, ILL

[In the Section on Oral Surgery, June 1883]

Mr J B T, merchant, aged 46, of bilious temperament and fine physique, consulted Dr A, on Feb 10, 1883, with reference to a diseased condition of the teeth and gums and a profuse discharge of pus. Upon examination it was found that the right central incisor had been lost about five or six years previously. The teeth were very loose, those most affected were the remaining superior incisors and cuspids. The first bicuspid and first molar of the left side, the second molar of the right side, and the inferior incisors and cuspids and first molars were also affected. The diagram upon the blackboard illustrates the condition only of the anterior upper teeth, the dotted lines representing the loss of bone tissue (alveolar process) as ascertained by the use of a probe passed under the gum and following the roots of the teeth. (See cut.)



On the labial surfaces, the probe passed to the points indicated by the dotted lines around the teeth. In the case of the left lateral, the alveolus on the labial surface was completely gone, and nearly so in the case of the cuspid, only a small septum of osseous tissue remaining near its neck. The palatine

wall of the alveoli of these teeth was still intact for the upper two-thirds, and nearly normal in the case of the others. A discharge of pus from around the necks of the teeth was first discovered about two years before, for which he had taken both local and constitutional treatment. When the patient presented himself the exudation of pus was very profuse, slight pressure causing it to flow out freely—at times as much as a half teaspoonful could be abstracted from the large pocket surrounding the roots of the left lateral and cuspid.

There was no history of syphilis, but there was a family tendency to scrofula, and at the time the patient presented himself he was under treatment, and had been for some months, for chronic inflammation of the kidneys.

Dr Allport treated the case by first carefully scraping the whole of the denuded surfaces of the teeth and the edges of the alveoli with thin, narrow chisels made especially for the purpose. Aromatic sulphuric acid was then applied to the apex of each tooth by the aid of Farrar's syringe, the first application of full strength, afterwards one part of acid to three parts of water, the case being treated every day for a week. Later the acid was discontinued and glyco-phenique of full strength substituted, the patient reporting three times a week. Treatment was begun February 23, 1883, and on May 11, 1883, the case was discharged cured. The attachment of the teeth to their sockets was firm, and there seemed to be a new deposit of osseous tissue around the roots of the teeth. The gums have receded, though to no great extent, as will be seen by the dotted lines across the teeth in the diagram.

Dr D H Goodwillie, of New York City, remarked on Dr Allport's paper as follows:

"This case of Dr Allport's, from the history he gives, is, without doubt, one of repair by new tissue, both osseous and fibrous. Wherever the periosteum was preserved a new osseous tissue was formed, and in the more internal parts, where there is no bone reproducing membrane, the new deposit was fibrous."

It is a well established fact that bone reproduction is produced principally by the periosteum and soft tissues, so that wherever this membrane is preserved in the removal of necrosed bone there will be reproduction when the conditions are favorable to it. Such conditions are, first, a careful preservation of the periosteum and soft tissues. Second, good free drainage, and a thorough and constant cleansing by irrigation. Even the normal secretions of the mouth, if they are left long enough, become abnormal and prevent the new bone forming process. Third, to have external support when necessary, in order to prevent motion and to secure the desired shape of the new bone. The general health of the patient to be put in the best possible condition.

Dr Goodwillie. Was there any examination to determine the condition of the pulps? Were they dead or alive?

Dr Marshall. No special attention was paid to this point, but the presumption is that the pulps were dead.

Dr Talbot con credit ability of

such a case were not the evidence so strong. We all know that the tendency of the alveolar process in these cases is to recede. He has seen no cases in his own practice where it was reproduced after having once been disintegrated; he has seen it contract and still keep the tooth in place, but he could not understand how it was possible that reproduction of the bony tissue could be brought about.

Dr Marshall was glad that Dr Goodwillie had brought up the subject of alveolar abscess simulating catarrh. A case of this character which had come under his own observation was that of a gentleman aged 30 years who had been under treatment for catarrh for a year and a half. Coming to have his teeth cared for, the central incisor on the right side was found to be devitalized and tender, it always gave trouble whenever a cold was taken. It was also noticeable that the catarrhal discharge was always from the right side. He opened into the tooth and found after cleansing it that water could be forced through it into the nostril. The tooth was treated, and with its cure the catarrhal trouble disappeared. Another young man—a student of dentistry—had an incisor which had been devitalized by his preceptor. It was neglected, and an abscess formed. He also had a discharge from the nose. On examination the condition of the incisor was discovered, and on its being treated the nasal discharge disappeared.

Dr G S Shattuck, Detroit. In the case of pyorrhœa alveolaris reported by Dr Marshall, was there any deposit of tartar?

Dr Marshall. Yes. The scraping of which I spoke was performed several times, and was quite painful.

Dr Truman W Brophy, of Chicago, had seen this case while it was under treatment—the results achieved were certainly remarkable, and were to be attributed not only to the skill with which the case was treated, but to the vigorous condition of the patient. There is now not a vestige of suppuration, the gums are pink and the teeth firm in their sockets, which seem to be thoroughly restored. As a rule, teeth in the condition in which these were when the patient presented for treatment would be lost, it being only a question of time. The results reached here should give us encouragement to make the attempt at cure even where the case presents formidable obstacles. In connection with the treatment of alveolar abscess, Dr Brophy commended the use of peroxide of hydrogen, much is claimed for it, it has the most marked antiseptic properties—even more so than carbolic acid. This is carried into the sac, and immediately following its introduction a foamy mass passes out. This is due to the oxidizing action of the drug on the decomposing fluid in the sac and to the destruction of the bacteria. The use of sulphuric acid has been criticised by some. The speaker has had good results in his own practice, and regards it as an excellent remedy. It destroys the necrosed bone, but acts only slightly on healthy tissue.

Dr Shattuck had been treating a right central affected with pyorrhœa alveolaris. The anterior plate of the alveolar process was all gone, and a probe could be passed to the apex on the anterior surface.

Treatment was dilute aromatic sulphuric acid once in twenty-four hours, washing clean with water twice a day.

Dr E C Briggs, Boston, questioned the correctness of the statement that new bone had been produced in the case reported by Dr Marshall. The only evidence of a reformation of bone is the feeling of hardness of the gum and the firmness of the teeth. This is hardly enough. There was no periosteum left to reproduce the bone, and that result seems impossible under the circumstances. He had had a case in which the alveolar process, from the superior central to the third molar, was affected, resulting in the loss of the whole of the outer plate of the alveolus and a portion of the inner. After removal of the necrosed bone, the soft parts were stimulated, resulting in the complete filling up of the space occasioned by the loss of bone. The gum presented a natural appearance, with the exception of one slight depression back of the canine, and felt as firm and hard to the touch as before. In this case, Dr B was positive there had been no new bone formation.

Dr Marshall was inclined to think that in the case he reported the periosteum was lifted from the bone, not destroyed, and thus was able to assist in the new formation.

Dr C R Butler, Cleveland, could see no reason why Dr Marshall or Dr Briggs should be at a loss to ascertain the condition about the roots in the cases they had reported, or to decide whether the formation was cartilaginous or osseous. The exploring probe would determine the matter surely to the educated touch, with only slight pain to the patient. It does not follow that the pulps were dead, even with the amount of suppuration reported in Dr Marshall's case, though it may be safe to say that they were dead in many such cases. That should be one of the first points to be determined. We may get contraction of the tissue about the necks of the teeth, sufficient to hold them firmly, where the transverse septa are lost, even when the cancellous portion of the bone has been dissolved out. You cannot have abscess or death of bone without suppuration. That is nature's method of getting rid of it. Many overdo their treatment by washing out too much, but more err on the other side by not cleansing as much as should be done. He regretted that we had not a clearer diagnosis of the case. If the bony sockets have been restored, as has been reported, we ought to have some better knowledge of what the evidence is.

Dr Talbot thought such cases should be managed on the general principles of treatment for carious bone in any part of the body. The necrosed bone should be cut or scraped away or otherwise got rid of, and then reproduction of bone can take place.

Dr Marshall. I will have the teeth examined on my return to Chicago, and will forward to the *Dental Cosmos*, in time to appear with its report of this meeting, a statement of the condition of the pulps of the left lateral and canine, also, the result of the examination into the character of the new formation in the sockets.

We have pleasure in presenting the following from Dr Marshall.

TO THE EDITOR OF THE DENTAL COSMOS

Dear Sir—As I promised the members of Section 7, of the American Medical Association, I send you the result of the examination made by W W Allport and myself of the case of pyorrhoea alveolaris (reported by me for Dr Allport) relative to settling two points, viz *first*, if there was really a *new formation of bone* about the roots of the teeth, and *second*, if the left lateral incisor and cuspid were *still vital*. In regard to the *first*, I would say that an exploring needle was passed through the gum in four different places over the roots of the teeth mentioned and between them. In each case it met with *firm resistance* giving evidence to the sense of touch of being bone tissue.

To the second would reply, that on applying a piece of ice the patient exclaimed "I could have told you that without hurting me in that style." The teeth are quite sensitive to the application of cold, and the color is normal, so that *there can be no doubt about their vitality*.

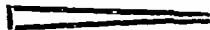
Inasmuch as Dr Allport is positive that he passed his instrument entirely over the ends of these teeth and scraped and smoothed them there in his treatment of the case, there can be no doubt that the pulp connection at the apex was severed. Now arises the question, how can we account for the vitality of these two teeth? Has there been a union—which is very improbable—of the vessels and nerve and pulp at the apex? Or is the vitality maintained, as Dr Allport believes, through a vicarious function of the pericementum? The latter view seems to be the most probable explanation of the phenomena, for it has been demonstrated beyond doubt that vessels sometimes penetrate the cementum and dentine, and anastomosis is established between the vessels of the *pulp* and pericementum. Canals for the passage of the vessels have been demonstrated out of the mouth. Dr Barrett of Buffalo N Y, demonstrated incidentally the fact of their presence while experimenting with a solution of gutta serena and chloroform as a filling for pulp canals. He found that it penetrated not only the most tortuous canals, but passed through certain canals in the sides of the root having an external opening.

JOHN S MARSHALL

Dr Talbot had had two cases of septicæmia as the result of neglected alveolar abscess. The first was a married lady aged thirty-five. When she went to the seashore some years ago she was suffering from a severe toothache in the left first superior bicuspid, for which she had called upon a dentist. He diagnosed a dead pulp, and the tooth was bordering on alveolar abscess. He drilled through a filling to the pulp chamber, and treated temporarily, advising her to have it treated properly on her return to Chicago. Having no further pain, she declined to do so for two years. Her health began to fail, she had no appetite, and finally became unable to retain food on her stomach, nourishment being injected per rectum. She had frequent violent fits of vomiting. Last summer she was advised to go to the seashore, where she remained two weeks, when there was considerable swelling of the face—the first thing noticed in regard to her teeth since her troubles commenced. She was sent to me, and, on removing a piece of cotton from the cavity in the tooth the dentist had treated two years before, a most offensive odor issued. She had a vomiting spell in the office, and afterwards was confined to her bed for two weeks, when she commenced to recover. He visited her two or three times a week to cleanse out the cavity. In three or four weeks she commenced to rally, and now, at the end of six months her health is completely

The second case was a young lady who called September 7, 1882. She was anæmic, had no appetite, her eyes had been treated for two years for conjunctivitis, without relief. The gums were in an oedematous condition, saliva ropy and mixed with pus discharging from the gums, and also from eight abscesses in different parts of the mouth. Upon exploring a fistulous opening at the margin of the gum between the roots of the left lateral and canine, caries was found to have extended into the antrum as far as the floor of the orbit. Two years previous, while undergoing a dental operation she took offense at her dentist, and since that time nothing had been done to her teeth. Treatment was commenced by removing all foreign substances from the necks of the teeth, cleansing the canals of the teeth with abscesses, and injecting carbolyzed water into the opening in the jaw, tonics were given to aid digestion. At the end of three months the teeth were in a healthy condition, patient had also improved slightly in appearance, and attention was directed to the carious bone. A tent of cotton inserted into the fistulous opening between the lateral and canine to enlarge it caused intense suffering, patient's face was swollen so that one eye was closed, and the flesh had a bluish cast. The tent was removed and the accumulation of fetid matter evacuated. Morphia was administered to quiet the pain, but there was no stop for thirty six hours, pulse was high, temperature averaged over 100°. Her family physician attended her with the speaker, and at the end of three weeks she was able to resume her visits to the office. The cleansing process was continued, and in March patient was so much improved that she was sent east to spend the spring months.

Adjourned

Dr Henry Barnes, Cleveland, O, said. A married lady, aged about 40 years and mother of six children, came to my office some seven years since. I found a deep groove commencing at the cervix of the superior cuspids on either side and involving all the teeth on the buccal surface, back to and including the second superior molars. This groove, from its point of commencement at the cuspids, gradually and uniformly widened and deepened along its course, the depth corresponding with the width, and about this shape  and size in proportion. About three years since the eldest girl, aged 18, died of consumption, and this spring another girl, aged about 17, also died of the same disease. I do not know of any other hereditary taint in the family. In appearance they are all healthy and robust.

I have not seen the case since that time, and therefore can not report as to its progress. The surfaces of this groove were polished like glass and were translucent, and, to the touch of an instrument, as hard as enamel. I may also add that in the approximate surfaces of all the back teeth, upper and lower, were large amalgam fillings, while gold in front. These had been in for many years. The teeth were

CATARRH OF THE ETHMOID CELLS AND THE
FRONTAL SINUS AND THE NASAL CANAL—THE
CAUSE, DEPOSIT OF EGGS OF THE
SCREW MAGGOT (LARVÆ) AND
THEIR DEVELOPMENT.

BY FRED HUMBERT, M D , F C S , AITON, ILL.

Mrs F W , a farmer's wife, always enjoyed good health. On Monday, September 27, 1875, about noon, she was attacked with headache, flushed, burning face, and expected a malarial chill. From that time the pain in the region of the frontal bone, at the root of the nose and below the eye, extending to the right ear, increased. At times the pain was more severe than at others, but never entirely left. These pains were described as dropping, tearing and boring, and so excruciating were they that at intervals, day and night, her cries could be heard at a great distance from the house. Tuesday evening bloody mucus began to run from the right nostril, which was some swollen. This swelling extended on Friday over the whole right side of the face. On this day, the fifth of the complaint, four larvæ dropped out of the right nostril. When I was first called to the patient, October 4, only the right lips and nostril were swollen, the acid discharge having somewhat blistered the lips below. On introducing the probe into the right nostril it was impossible to pass it to the posterior nares, but it moved with an unusual freedom in the direction of the frontal sinus and cells of the ethmoid. In this direction it would pass to the depth of three and a half inches. The patient lying on her back, head slightly elevated, I injected one ounce and a half of carbolic acid solution, which was retained. When I asked if the fluid passed to the pharynx, she replied no, but that it was running back and forth in her head. After the injection of an ounce and a half more, the solution mixed with bloody mucus began to flow from her right anterior nostril. This discharge was of an exceedingly offensive smell. After each such discharge maggots dropped from the nostril.

From Monday, when I first saw the patient, this bloody mucus decreased, but the larvæ continued to drop from the nostril. These larvæ dropped out from four to fourteen at a time, till on the twelfth day one hundred and forty or more maggots had thus come out. Each maggot was alive, matured, and seemed to drop so as to find in some sheltered spot a home till fully developed into the fly. On the eleventh day the injected fluid for the first time passed out of the posterior nares, and nearly as clear as when injected. On the thirteenth day soup and drink regurgitated through the nostril. Her speech, which had been perfectly natural, now became scarcely audible from paralysis of the palatine muscle—an affection so often observed in diphtheria. In this distressing malady sleep never came to the patient's relief only at five minutes at a time. The system was well supported. The cavity was washed out with carbolic acid solution, and snuffing warm water, and steam drawn up through the nose, the face and forehead was enveloped in towels wrung out of hot water, which relieved her very much. The fear

expressed in the words, "The worms will eat me up!" had to be assuaged by explaining to her the nature of this maggot—that it was not a worm. Through these means some relief was afforded the patient. No narcotic in large doses was administered, fearing lest during sleep the secretion or maggot might pass into the pharynx. The larvæ were three-fourths of an inch in length, except a few that seemed one line or more shorter and a shade whiter than the others. They were of a yellow hue, conical shape, and had attached to one end, which was more pointed than the other, two horn-like hooks. With my small glass I could count ten distinct rings. Into the meatus nasium medium, the sinus frontalis, the two anterior cells of the ethmoid and the sinus maxillary opens. Thus the nasal cavities are connected with six sinuses, three on either side. The labyrinth of the ethmoid consists of cells of the finest structure, separated by thin walls of bone covered with periosteum or simply a layer of mucous membrane. The whole is of a spongy-like structure. When the probe was introduced into the right nasal cavity it moved with great freedom, without pain, in any direction, to the distance of half or three-fourths of an inch below the frontal sinus. It was evident to me that the cavity of the frontal, and more especially that of the ethmoid, was largely dilated, permitting this free movement of the instrument. Evidently the slightest force would have passed the probe into the base of the brain. The fly that laid these eggs must be a species of the *ostreus*, which deposits its eggs in the noses of sheep and goats, and when developed into larvæ pass up into the frontal sinus of these animals, while other or the same larvæ from a fly pass into the fauces of the deer, into the slush of horses, or into the wounds or bruises of cattle. Others deposit their eggs on the point of the hairs on the shoulders and legs of the horse, whence they are licked up and carried into the stomach, where they develop into bots. But no one has seen this fly, which lays its eggs in the nose of man in this or more southern latitudes, and which produces the screw-worm (larvæ).

Before 1850, a fly often appeared in warm days in September (after a wet season) in the heavy timber in the American Bottom, between Alton and St. Louis. The teamsters, during their journey through this timber, rubbed the slushes of their horses with pennyroyal to protect them from this fly, but at that time there never was a fly known which laid its egg in the human nose. A farmer told me that his father, who drove a government team in 1845 from Arkansas to a fort in the Indian Territory, frequently told him that on approaching the Texas line they dared not sleep at noon in the open air lest a certain fly should deposit its egg in their nostril. Lately a lady told me (when we were speaking of the below reported case) that her uncle moved in 1846 from Indian creek, in this county, to Texas, near the site of the present city of Dallas, and that his and several children of other families died from screw worms, which a fly deposited in their noses, and that they had to remove to other parts of Texas, as they could not let their children sleep in the day time. Monday,

September 18th, 1882, I was called (in consultation) to see a woman who lived near where the former case occurred. I found her under the effect of morphine. She was unable to hear, or feel any pain. She had at that time discharged 180 maggots from her nose. There was a swelling on each side of the nose, over the union of the cartilage and bone. In the middle of each swelling, which fluctuated, there was a small opening about a tenth of an inch in diameter. I think the maggots, when small, entered one of the openings of the mucous glands, and after maturing, being unable to return through the same channel, as the opening was closed, they then bored or ate through the cartilage and located between the cartilage and skin. I united the holes in one to give them a free passage, and a free discharge to the acrid ichorous fluid there collected. Four maggots came out of it. Before they ceased coming over 300 were discharged from her nostrils. I believe that two flies, at short intervals, deposited their eggs. The attending physician at that time told me that one Dr Wadsworth had had, two years before, a similar case, with worms discharged. This case was some two miles from Collinsville, in this county. The patient discharged sixty and died. Two weeks after a negro north of Upper Alton suffered in the same way. His physician told him the worms would eat into his brain and he would die, but he recovered. These four cases occurred in Madison county.

The fifth case is reported in the *Missouri Republican* as follows:

The wife of a Baptist minister nine miles north of La Cygne, Kansas, has died from a strange ailment, at the age of about fifty-five years. She was a sufferer from catarrh for a long while, and by reason of this disease her nose became much impaired. Lately the inside of her nose and parts immediately surrounding the nasal organ inside the head became filled with parasites, and she endured great pain in consequence for eight days, after expiration of which time Dr B G Mendenhall, of this city, had succeeded in removing the last of a large number of parasites, but she survived only forty-eight hours. (The italics are my own.) I took from the last case, September 18, 1882, twenty-five living maggots, filled a glass jar half full with soil and dropped them on it. They crawled, screw-like, in five minutes into the soil. I then covered the opening with white domestic, hoping that next year they would come out of it as flies, but on October 6 there were fourteen flies in the jar. Reckoning from the time when the patient first felt the pain, it took thirty-nine days for the development of the fly. The fly is about four times as large as an ordinary house fly. The body is a dark glistening green, the eyes of a bronze color and the face yellow. I sent four flies and several maggots to Professor C V Riley, of the Smithsonian Institution, at Washington, D C, for examination and identification. To this day the fly which lays its eggs in the nose of man was not known, but the worms which came out of the nose of animals were known to the ancients, as they believed that the disease called stiggers, or turning fits, in sheep, was caused by maggots in the frontal

"No doubt this is why the ancients believed that the larvæ from the sheep's head were an effectual remedy in epilepsy. Of course they were prescribed on the principle that what produced a disease will cure the disease. As early as 560 B C Alexander Trallianus tells us that at two distinct utterances the Oracle of Delphi recommended these worms to be used by Democrats of Athens, who suffered with epilepsy. Look at the sage utterances

*Quis madidis cerebri latebris progredere capelli,
Dicitur humoris Vermem de vertice longum*

The other

*De grege sume capræ majoris ovibus alumnæ
Ex cerebro Vermes. O-is dato tergora circum,
Multiplici vermi pecoris de fronte revulso*

"But as Democrats knew nothing of natural history he asked a man 100 years old, who told him to take the worms which fell from the nose of sheep, tie them in a bag and hang it from his neck." Oken's *Naturgeschichte*, 1835, B 5, page 77. There is truth in the adage, "There is nothing new under the sun." The priestcraft, preaching through the oracle of Delphi to the people "The cause of the sickness will cure the sickness," repeats itself in our day in the oracle of Hahnemann, the father of homœopathy: "remove a natural sickness with such remedies as would produce a similar sickness" (*Similia similibus*). Organ der Heilkunde v Samuel Hahnemann Dresden, Leipzig, 1833, Pref page 8. Is there not a striking similarity between the utterances so far apart in time, when seen in the following plain focus 560 B C—"cure the cause with the cause"—188 A D—"cure like with like." Strange that in our enlightened time, when science in all branches of learning has given us such valuable and practical information, that there still remains in some of our highly educated, and, in other respects, so practical citizens, that mystical belief of our dark age, as stated in the garb of homœopathy.

Diefenbach, in *Rust Handbuch der Chirurgie*, Berlin and Vienna, 1830, book one, page 203, in an *Artical Abscessus Sinus Frontalis*, says "In some cases insects have been seen to come out of the sinus frontalis, accompanied with great pain in the frontal bone." He mentioned that *Burreus de Kanefield* in his *Institute Medicine Practice* volume 3, section 7, year 1810, collected several cases. The *American Encyclopædia*, volume 8, page 296, says the muscid maggot belongs to the *m domestica vermicilia* or *S carnaria* which infest the human body, and many cases since recorded in medical journals. The description of the parent of this maggot and their habits are very different from the cases as reported in the books. There has not been in the last fifty years (or further back) a case known in this country where they have been noticed in them, in so thinly settled a country (though observed south) that a living man in life turned into worms. After I had perused the above I received from Professor C V Riley, of the Division of Entomology, Smithsonian Institution, an answer to the letter I wrote him when I forwarded him flies and maggots, in which he says "I have no doubt that the fly, has been some doubt at of worm. These spec-

imens prove to be the *lucilia masellaria* of Fabricius. See foot note ¹. It is, moreover, interesting to hear of it from Illinois, as it has been considered as essentially a southern insect." He also sent me a page from the *American Entomologist*, December, 1880, in which he says "A particular fly bit a lady on the nose. A few days afterwards it was discovered that screw worms had formed and made their way under the eye to the brain. Physicians administered calomel, arsenic, etc., and that two hundred worms were discharged and Doctor Eaton recently extracted over two hundred from the nose and head of a Mexican boy. Thanks to the doctor's skill, the boy recovered." Professor J. P. Stelle, one of the agents of the U. S. Entomological Commission, says "that pyrethrum is a never failing remedy for the screw worm. The application is made by simply dusting a little powder on the sore. The worms are air breathers, and it soon causes them to die."

This is so far good for wounds and bruises, but when the maggots have burrowed high up in the ethmoid cells or frontal sinus if we blow the powder up into the nose we cannot reach them. How can it penetrate the compact mass of two or three hundred maggots? All the laudation that doctors succeeded in extracting them shows merely that they claimed for themselves what belonged to this maggot. As I said before, when they are fully developed they drop and seek another field, the earth, for finishing the metamorphosis. They are not worms which have sexual organs and multiply. They only nourish themselves from the blood, like leeches, and when grown, leave. It is, therefore, very important that this strange and terrible disease should be well understood. That there is no way of abating it, as the maggot's skin is horny, and any chemical applied direct upon them would destroy the mucous membrane and the much dilated bone before it would affect the maggot. Carbolic acid solution, of moderate strength should be injected, to free the cavity from the foetid, acrid mucous secretion, to relieve the pain, and to prepare a free egress of the maggots. Warm water applications and a just use of chloral are far the best. Olive oil, injected in large quantities to cover the openings between the rings through which these maggots breathe, may effect their early expulsion. But one of the most important things is to make the patient acquainted with the nature of this insect, that they may not, as reported in the New Testament of Herod "Faten of worms and died, because he arrogated to himself divine honors." The discharged maggot must not be thrown upon the ground, but be destroyed by fire.

¹ This cannot be the true name. Accidentally the Scientific American of October 13th, 1883 came into my hand in which my letter of October 7th 1882 to the Smithsonian Institute, with Prof. C. V. Willey's report copied from the proceedings of the U. S. National Museum, are printed and which contains many inaccuracies. One of the most important the Professor in the same says "The head is dark, glistening green, a bronze face etc." when I said the head is of bronze color with a yellow stripe in the middle the body glistening green. Scientifically I should have said the eyes are of bronze color the face yellow (or orange) the body glistening green.

MEDICAL PROGRESS

ANATOMY AND PHYSIOLOGY.

CONGENITAL ECTOPIA OF THE HEART.—MM. Sappey, Vulpian and Marey have made a lengthy and interesting report as a committee appointed to examine this singular form of malformation to the Paris Academy of Medicine (*Bulletin*, tome XII, No. 42). The subject was a woman in whom the sternum was bifid, the linea alba markedly thinned down to the umbilicus, and the diaphragm divided in its anterior portion so as to allow of the beating of the heart under the hand, only separated from it by a thin layer of the soft parts covered by a lax, wrinkled and pigmented skin. The ventricles were small, their long axis being directed vertically, hanging towards the abdominal cavity. In palpating the epigastric region above an umbilical hernia, an intestinal protrusion was found of a circular form and of about 7 centimeters diameter. Above this was the triangular space in which beats the heart. This space is limited above by the sternal fissure, to the sides of which descend in diverging the costal cartilages. The superior portion of the sternum remains intact, in a length of 8 centimeters, the triangular space is limited inferiorly by a fibrous band, which forms the superior border of the intestinal protrusion mentioned.

The whole of the ventricular portion of the heart can be explored and seized between the fingers. Auscultation showed a nearly normal action, there was a systolic souffle quite intense and prolonged, seated at the base of the heart, and apparently due to a narrowing of the aortic orifice, the antecedents of the subject disclosed none of those diseases which ordinarily produce organic affections of the heart. The sense of touch established beyond doubt the fact that, at the moment the ventricles diminished in size and hardened, the finger was strongly pushed upon, and that it is the systole which produces the heart beat. This phenomenon was noted not alone at the apex of the heart, but throughout the whole superficial area of its ventricles from the apex to the auriculo-ventricular septum.

Two clinical polygraphs were applied, one to each ventricle, and gave a perfectly synchronous record, which differed only in amplitude, the pulsation of the right ventricle being the most feeble, on account of the lesser degree of pressure exercised upon the blood in that cavity. This synchronism continues during the disturbances of the heart from different causes. The simultaneous inscription of the changes in volume of the ventricles and of their pulsations was effected by means of a funnel-shaped vessel which was made to enclose the ventricles and act through the influence of the contained compressed air upon the recording levers, while an explorer of the pulsations was applied to that part which remained outside of the vessel. In the first period the ventricles changed their form and became less hard, the ventricular mass took an elongated form, and pressed further into the vessel, in this period the blood did not escape from the ventricles as is shown in animals by marking the

degree of pressure of the blood in the ventricle and aorta. The second period establishes the evacuation of the ventricles, diminution in volume of these organs, and the period of pulsation. The third period established a post-systolic repletion of the relaxed ventricles, and showed that the repletion commenced as soon as the systole was finished.

The aorta was readily reached and compressed through the thinness of the linea alba, and two tracings were taken simultaneously—that of the femoral pulse and the pulsation of the left ventricle. The pulsations of the heart were slightly diminished and their form modified so as to show an increase of resistance on the part of the ventricles at the end of their systole. When the compression ceased, pulsation in the femoral recommenced, the heart was much accelerated in its movements, and the pulsations were feebler.

The positive tracheal pulse was well marked. This name has been given to the pulsation produced by holding between the lips a tube leading to the registering tambor, when a tracing is produced, in a subject of normal conformation, that is synchronous with the heart beat, and is formed by the movements of the air entering into and passing out of the lungs, under the influence of the heart, as, when the ventricles are emptied, the heart occupies less space in the thoracic cavity and creates a vacuum, which provokes an *entrance* of air through the trachea. Furthermore, the blood with which the right ventricle distends the pulmonary artery and its vessels displaces a certain quantity of air, which tends to pass *out* of the lung. In effect, the force of aspiration predominates, making the tracheal pulse negative. But when there is a solution of continuity in the thoracic walls, the lungs are no longer under the influence of the change of movements of the heart, and the tracheal pulse becomes positive in recording the result of the penetration of the blood into the branches of the pulmonary artery—that is to say, an expulsion of air with each systole of the ventricles.

These observations sufficed to show, in the opinion of the committee, that the results of physiological experiments, made upon the larger mammalia, can be perfectly applied to the knowledge of the mechanism of the human circulation.

ANIMAL ROTATION—M. Delaunay has given some curious results of his study of this subject, in a communication to the Société de Biologie (Comptes Rendus). He finds that certain animals always turn to the right, while others turn to the left, others indifferently to either side. In the human species, however, he finds a peculiar condition of things. M. Delaunay calls rotation to the right the movement in which the right shoulder is carried backward while the left is carried forward, rotation to the left being the opposite. Either foot is used in a certain proportion, as in the waltz, but when the individual turns round several times without changing his place, he does it on his right foot if he turns to the right, and on his left foot if he turns to the left.

Certain of the inferior races of men do not rotate, as the Canaques and the Negroes. The middle races

turn to the left, as the Chinese, Japanese, Turks, Brazilians, Mexicans, Araucanians, Kalmuks. Others turn both ways—Hindoos, Moroccans, Tunisians, Transylvanians. The superior European races turn to the right, however, the proportion of individuals turning to the left is considerable in Portugal, Spain, Greece, and also in England, Italy and Germany. In Hungary the *szaradases*, the national dance, which was danced to the left in the time of Charlemagne, is to-day danced to the right.

In France, in all the national dances rotation is to the right. All treatises on dancing proscribe turning to the left as contrary to usage and propriety. The teachers of dancing who teach rotation equally to either side, declare that their pupils become dizzy sooner when they turn to the left. Ballet dancers execute their feats most effectively on the right foot. The left foot and leg are so far wanting in this facility, that they have to be exercised to double the amount in preparing for the ballet. Women, according to M. Delaunay, as a rule turn equally well to either side, and many prefer rotation to the left, so turning when they dance with each other.

Children turn at first to the left, then as they grow larger they turn to the right. In 68 children of from $3\frac{1}{2}$ to 7 years of age, 38 turned to the right, 19 to the left, and 11 indifferently. At 10 years of age they turn generally to the right. The children which turn to the left are weaker than the others. The great majority of idiots turn to the left. Those who are left-handed turn more readily to the left.

The conclusion of all this is, that rotation to the left being controlled by the right cerebral hemisphere, it predominates in the inferior races, in women, in children, and in the weak-minded. On the other hand, the left cerebral hemisphere, which controls rotation to the right, predominates among the superior individuals—men, adults, and persons of intelligence. M. Delaunay intends to carry this study further into various movements, the sensations, and even into the moral and intellectual faculties, as expressed by muscular movements on one or other of the sides of the body, but never on both with the same degree of intensity.

OBSTETRICS AND GYNÆCOLOGY

A POMADE POT IN THE VAGINA FOR FOUR YEARS—**EXTRACTION**—As a companion article to the one reported in this journal (No. 18, Nov. 10) on the extraction of a pomade pot from the rectum, we give the following as reported by Dr. Aubeau in the *Gazette des Hôpitaux*. We see by these notes that the excessive fondness of our French neighbors for pomades does not confine itself to the use of the preparation simply, but extends also to the vessels which contain it.

The case in question is that of a young girl twenty years of age, small, ill-looking, and apparently at the last stage of anæmia and emaciation, affected with extreme nervousness occasioned not only by her feeble and suffering condition, but also by the general reprobatation of which she was the object. Accustomed from infancy to vicious practices, when fifteen and one

half years of age she introduced a pomade pot into the vagina. Once beyond the vulva, it became impossible to remove it. She kept this secret until vaginal catarrh, suppression of the menses, obstinate constipation, rectal and vesical tenesmus obliged her to confess. Two years and a half later a physician attempted its removal, succeeding only in breaking off fragments from the edges of the pot. Other attempts were made during anæsthesia, resulting in a slight hæmorrhage, severe pains and the discharge of urine from the vulva.

She declared to Dr. Aubeau that the pot was small, cylindro-conical in shape, and introduced by its smaller end. The appearances as observed by him were such as might be expected from the previous history, of extreme irritation to the external parts. The hymen was seen to be partially preserved. By vaginal touch a foreign body was felt a phalanx high in the vagina—hard, solid, a little roughened, and giving the sensation of a phosphatic vesical calculus. On attempting to remove it, it was felt to have swollen behind the pubis and ischire, to have become spheroidal and to be wedged into the cavity, pushing the rectum backwards and the bladder forwards. In effect, the vagina was filled with an immovable calcareous mass, in size and shape like that of a duchess pear. At no point could the smooth and polished surface of the glass be felt. Its consistency was found to be friable like plaster, and accordingly, by the means of dressing and artery forceps, a spatula and a cautery in the shape of a spoon, Drs. Aubeau and Lefebvre, in the country village where she lived and where more suitable instruments were not obtainable, proceeded to remove it. In about a half hour they had scraped their way down to the pot itself. Then, by applying a crown of artery forceps to the edges so as to protect the mucous membrane, and separating and protecting the lips of the vulva, by carefully drawing upon it they succeeded in the removal of a pomade pot four centimeters in diameter and six centimeters in length. The operation occupied an hour and a quarter. When the vagina was completely emptied, its overdistended walls did not immediately contract and enabled them to find the uterus, although pressed very high up to be healthy, and a small perforation through the vesico-vaginal septum on a level with the neck of the bladder. From this time everything progressed favorably. A month later the vesico-vaginal fistula was treated with success. The menses returned, and four months later the patient married. Now—four years since the removal—the patient is in a very satisfactory local and general condition, inclining to be not only stout but obese.

TOXICOLOGY AND MEDICAL JURISPRUDENCE

POISONING BY AN INFUSION OF FORTY-FIVE GRAMMES OF THE LEAVES OF DIGITALIS. RECOVERY.—Dr. Antonin Martin (*Le Courier Médical*) reports a case of this character to the Society of Medicine, of Paris, in a man 40 years of age. He remained for twenty-two hours after taking the drug without medical aid, and was under treatment for two weeks. The dose taken was equivalent to an infusion con-

taining 0.040 milligr. of digitaline. The first symptoms were those of irritation of the stomach and intestine, but the symptoms produced by the action of digitalis upon the nervous system did not appear for forty-eight hours. The pulse rate was reduced in the first twenty-four hours to 25 per minute, second day, 29 to 35, third day, 40—remaining about this rate for several successive days, but when the patient was discharged at the end of the two weeks his pulse rate was only 48. Dysuria was marked from the first, the patient urinating three or four times an hour, and only a few drops at a time for the first twenty-four hours, later, the secretion was more abundant, but the dysuria continued for a week. Marked aphasia was present from the fourth to the eighth day, when it disappeared. On and after the second day severe cephalalgia set in, which persisted for eight days. The affection of vision was marked and peculiar, there was

1 A diminution in visual power for near or distant objects, as shown in the want of ability to read a newspaper, except its title, and the inability to read a sign 30 centimeters high, at a distance of 50 meters.

2 A modification in the vision of colors—the patient saw everything green.

3 A vacillation of small objects, the letters oscillated.

4 A certain deformation of objects, and particularly their inclination to the left to about 45°. The letters on the signs were bent to the left, and the windows, equally bent, seemed lozenge shaped.

The visual disturbance continued for fifteen days. Before and after the poisoning the vision was normal, and the ophthalmoscope failed to detect any lesion on the twenty-fourth day.

SURGERY

SYPHILIS IN THE MONKEY.—M. Martineau presented to the Société Médicale des Hôpitaux of Paris (*Gaz. Hebdomadaire de Médecine et de Chirurgie*) the wax moulds of new syphilitic lesions observed in a monkey upon whom he had inoculated three infecting chancres eleven months before. The monkey, in whom the chancres appeared the 28th day after inoculation, and who presented consecutively papulo-erosive and diphtheroid syphilides of the penis, inguinal, axillary and sub-maxillary adenitis, as well as a marked emaciation, all of which have now disappeared with several plaques of alopecia on the head and back, has been attacked on the tenth month with an ulcerating lesion of the palatine mucous membrane. This ulceration ran a regular course of development and repair, and was finally replaced by a simple patch, paler and yellower than the surrounding mucous membrane. The evolution of syphilis, then, in the monkey, continues normally, in the same limits as in the man, and toward the tenth month exhibits an ulcerating syphilide. M. Martineau intends to continue his researches, he possesses a couple of monkeys of the same species, upon whom he intends to experiment with direct inoculation and the transmission through copulation, he hopes to obtain a reproduction of these animals, and so to study hereditary syphilis.

REMOVAL OF A LARGE CYSTIC CALCULUS BY SUPRA-PUBIC LITHOTOMY — John Tremeane, M R C S Eng, reports this case in the *Australian Medical Journal*. The calculus was $2\frac{1}{2}$ inches long $1\frac{3}{4}$ inches broad, 1 inch thick, circumference 7 inches and weight $2\frac{1}{2}$ oz 54 grs (1 254 grs-), composed of pure cystin.

RETENTION OF PLACENTA AFTER DELIVERY IN A UTERINE POCKET — Prof Herrgote (*Memoires de la Societe de Medicine de France*) relates a case, with admirable illustrations, of what he calls *enchatonnement* of the placenta. It is not easy to translate this phrase satisfactorily, but it signifies a condition of things which would resemble closely what we know as the hour-glass contraction of the uterus, were it not that there is an independent pouch projecting from the walls of the uterine fundus which encloses the placenta. The case, so far as the phenomena of labor and delivery of the child is concerned, appears to have been normal. The history of the case showed that bad treatment during pregnancy had been sustained, such as kicks upon the belly and three falls upon the back upon the staircase, but this treatment did not seem to be followed by any ill effects. The placenta not coming away in due time after delivery of a child by vertex presentation, abdominal palpation found the uterus two finger breadths above the umbilicus, hard and markedly bi-lobed. The principal lobe was the highest and to the right. Attempts were made to remove the placenta by introducing the hand into the uterus, and it was found to correspond in situation with the upper abdominal tumor—the cord attached and passing through a narrow orifice, which only admitted two fingers. The cord was detached from the placenta by the traction made upon it, and the constriction would not yield to any efforts at dilatation. No further efforts at removal were made, and the patient died of purulent peritonitis at the end of the fifth day.

The post mortem showed a uterus having a long axis, directed superiorly to the right, measuring 0 m 17. The entrance of the right fallopian tube was seen to be on a level with the constriction, which led into a lobe measuring 0 m 07 in diameter, and 0 m 07 in height. The origin of the left fallopian tube was 0 m 03 below the seat of constriction. The uterine walls were firm throughout, being of the thickness of 0 m 015 in the body of the uterus and of 0 m 003 in the pouch or lobe which contained the placenta.

This examination showed that the condition was not due to a vice of conformation, to a duplicity, complete or incomplete, of the uterus, that it was not produced by a spasmodic contraction of the womb, but that it rather resulted from the non contraction of that portion of the uterus upon which the placenta was attached, and which was afflicted with inertia, while the remaining portion of the uterus contracted, thus being passively distended over its contents and thinned in its walls, becoming a true hernial pouch on the uterine surface, the constriction to which became more and more pronounced as the body of the uterus diminished in size.

MEDICINE

INFLUENCE OF MORPHINISM ON PREGNANCY — In the *Societe de Biologie, of Paris* (*Comptes Rendus*), M Ch Fere gave his observations in a young woman of twenty-two years, who was hysterical and the daughter of a hysterical mother, who was addicted to morphinism. She had been using morphine freely for three years, at first for facial neuralgia, when she became pregnant. It being deemed advisable to diminish the dose, she was taken with intense uterine colics.

At the time the dose was diminished she was taking 24 centigrammes of chlorhydrate of morphine per day hypodermically, and was six months advanced in pregnancy. At the time of her confinement she was taking only 16 centigrammes. M Tarnier attended her through a normal labor. A progressive diminution of the dose of morphine was continued, but at each effort at reduction the uterine colics were reproduced and the uterine contractions checked the discharge of the lochia, causing a complication which required much care in the degree of diminution.

With the child there were also curious phenomena noted. During pregnancy the active movements of the child seemed to resent the absence of the morphia. After birth the child remained sixty hours without sleeping. There was evidently in this a relation between the absence of morphia in the mother and the insomnia in the child.

GENERAL PARALYSIS AFTER DIPHTHERIA — The *Australian Medical Journal* gives two cases of this rare sequel to diphtheria. The first is a case reported by W Snowball, M B, in a female child of four years of age. Four weeks previous to her being first seen by the doctor, she had what her medical attendant called an attack of "ulcerated sore throat," which lasted about 7 days, and her present symptoms dated from that period. The throat gave evidences of its previous ulcerated condition in enlarged tonsils and a scar on one side. There was no paralysis of the palate muscles, and she swallowed well, was healthy looking, and well nourished. Two weeks later she had lost all power in her legs from below the knees, patellar reflex absent. Four days later in addition, paralysis of the right arm and fore arm, ptosis of right eyelid. The next day the intercostal and pectoral muscles became affected, and the child died of apnoea.

The second case is reported by Dr James Jamieson in a young man twenty years of age, who, when in the country, had a very mild attack of diphtheria, the disease in the house was very severe among the children, one of them dying of it. The throat affection was very slight after recovery, nor was there any loss of strength or of sensation of any part of the body. After a few days, however, of an unusual amount of walking, he complained of a weakness of the legs, and on examination exhibited distinct signs of paralysis of the legs with numbness of the feet, specially felt on standing, and absence of patellar reflex. He had none the less, good power of resistance against efforts to flex or extend the legs. He became steadily worse, the paralytic symptoms extending to the arms, but

no eye or throat symptoms ever manifesting themselves. By treatment with massage mainly, in a couple of months he was well on to recovery.

NEW INVENTIONS.

THE GASTROSCOPE—Mr J. Leiter, of Vienna, has constructed a singular modification of the microscope, to which the name of gastroscope has been given. Its use is for exploring the interior of the stomach. It consists of a metal tube, 65 cm long and 15 mm thick, bent at an angle of 150° at about one-fourth of its length from the lower end. At the lower extremity is contained an incandescent electric lamp for illumination of the interior of the stomach, and an objective, at the back of which is a prism to reflect the pencil along the length of the tube, at the bend it is again reflected by another prism to the eye-piece. Provision is made for a circulation of cold water to prevent the lower end of the tube becoming inconveniently hot.—*Medical Press*

CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING DECEMBER 1, 1883

Medical Inspector D. Kindleberger, to be relieved from duty on the retiring Board on the 9th of December.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM NOVEMBER 23, 1883, TO NOVEMBER 30, 1883

Wolverton, William D., Major and Surgeon assigned to duty as post surgeon at Washington Barracks, D. C. (Par 7, S. O. 222, Department of the East, November 27, 1883.)

Merrill, James C., Captain and Assistant Surgeon relieved from duty in the Department of the East, and assigned to duty at Columbus Barracks, Ohio (Par 7, S. O. 270, A. G. O., November 24, 1883.)

Appel, A. H., First Lieutenant and Assistant Surgeon relieved from duty at Fort Warren, Massachusetts, and assigned to duty at Madison Barracks, N. Y. (Par 4, S. O. 217, Department of the East, November 21, 1883.)

Brewster, William B., First Lieutenant and Assistant Surgeon extension of leave of absence granted September 15, 1883, further extended two months (Par 4, S. O., 271, A. G. O. November 26, 1883.)

Maddox, Thomas J. C., First Lieutenant and Assistant Surgeon granted leave of absence for two months (S. O. 136, Department of the Missouri, November 24, 1883.)

WE have reason to believe that a Medical Congress will be held at St. Petersburg next October, for the purpose of discussing all matters connected with cholera. M. M. Charcot and Pasteur, and other European authorities, are said to have promised to be present.—*British Medical Journal*

THE Journal of the American Medical Association. PUBLISHED WEEKLY

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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Address

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,
No. 65 RANDOLPH STREET
CHICAGO, ILLINOIS

SATURDAY, DECEMBER 8, 1883

OHIO STATE SANITARY ASSOCIATION—From a letter and circular published by R. Harvey Reed, M. D., Mansfield, Ohio, we learn that an active effort is being made in that State to organize a State Sanitary Association, to be composed not only of medical men, but of all citizens interested in the subject of sanitary science and the prevention of disease. That such an organization, meeting in general session once or twice a year, and more frequently in Sections in different parts of the State, could do very much to enlighten and direct public sentiment, not only in regard to the preventable causes of disease, but also in regard to the necessity for the enactment of wise and just laws for the promotion of the public health, there can be no doubt. The value of popular meetings for the consideration of topics pertaining to the sanitary interests of the people, when under judicious guidance, has been fully demonstrated by what has been accomplished in Michigan under the superintendence of her State and local Boards of Health. We trust the movement in Ohio may be successful in ultimately developing in that great and prosperous State a permanent and practically efficient health organization, one of the leading objects of which shall be to teach each individual citizen how to maintain a proper sanitary condition of his own premises.

THE PROPER MATERIAL FOR MEDICAL SOCIETIES

BELTON, TEXAS, Nov. 13, 1883

EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

Dear Doctor—We are on the threshold of organizing a local Medical Society, which is to be auxiliary to our State

Medical Association, and as the latter may be considered a "part and parcel" of the American Medical Association, we do not feel disposed or authorized to go into an organization with material at war with the *spirit*, if not the *letter* of the Code of Medical Ethics, as recognized by the National Society. Therefore, we most respectfully ask you if the following would be *suitable material* out of which to build up a local organization, viz (we will suppose a case) "Dr Wm Blank, Physician, Surgeon and Aurist, Chicago, Ill. Dr Blank has made all diseases of the ear a study for several years, and has gone to considerable expense in preparing himself to treat scientifically the same. He gives, in addition, *special* attention to the therapeutics of female diseases. He makes no charge for writing prescriptions if the party will have them compounded at the drug store of his friend, John Smith & Co. If desired, the best of references given."

Now, Dr, we have given you a case. We are satisfied we are well acquainted with your individual or private opinion on this question, but we would be gratified and *glorified* to have from *you* your views through the pages of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. Being a member of the Association, and consequently a subscriber to the JOURNAL, we feel that we have a right to ask the counsel and advice of its editor on questions of such vital importance to the stability of our *parent* organization. Your answer to the foregoing question will have a salutary influence from one extremity of this great country to the other, as the same difficulties are constantly arising. Please let us hear from you. Very respectfully,

H. C. GHENT

Although the questions raised by our correspondent in Texas have been substantially answered in the recent editorials on medical advertising and ethics, yet it will do no harm to devote a few words to the analysis of the supposed card of Dr W. Blank, as given above. First, the use of the title, "Aurist," in addition to those of Physician and Surgeon, is expressly forbidden by the resolution adopted by the American Medical Association in 1869. Second, all that is said in regard to extra study and preparation for treating diseases of the ear "scientifically," and the giving, "in addition, *special* attention to the therapeutics of female diseases," is directly intended to invite the attention of persons affected with particular diseases, and is, consequently, in direct violation of a well known clause in the National Code of Ethics. Third, the promise to write prescriptions gratuitously, provided they are to be filled at a particular drug-store, would plainly indicate a corrupt and dishonorable collusion between the physician and druggist, which should render both unfit for membership in any respectable society.

Consequently, Dr Blank could not be considered good material, or, in other words, a proper person for membership in a regular medical society. Neither could a society known to be composed of such members, be considered as eligible to representation in the American Medical Association.

THE INTERNATIONAL REVIEW OF MEDICAL AND SURGICAL TECHNIQS.—This is the title to a proposed new periodical, to be published at 51 Union Park, Boston, Mass., and edited by Drs. Joseph R. Warren, Charles Everett Warren, and W. Everett Smith. Some idea of its scope and purposes may be gained from the following paragraph, taken from the announcement sent to us by the editors:

"This *Review* will be issued quarterly, upon the first of January, April, July, and October, and will be devoted chiefly to the description, illustration, and discussion of instruments, appliances and methods of operation that have been recently devised or published. The manufacture, use, care, and repair of instruments, as well as makeshifts and expedients in case of emergencies, or inability to procure the instrument desired, will receive especial consideration. Reports of the history, properties and medical use of drugs will not be published, being foreign to the purpose of the journal, but descriptions of new devices and methods for preparing and administering drugs will be noticed. Descriptions will in all cases be as concise as is consistent with clearness, and nothing that is of value to the profession, and is known to the editors, will be omitted. The original articles of contributors will be published in full when ever it is practicable so to do, and articles from foreign journals will be translated by a competent person and revised by the editor in charge, so that the *Review* will be international in fact as well as in name."

NEWS ITEMS

MEDICAL TITLES.—Our provincial cousins "over the water" have shown a great deal of temerity lately in discussing the value, to the medical man, of the quality of the titles graciously bestowed by Her Majesty, and her Irish subjects have been indignant that they did not receive proper consideration in the distribution of such marks of honor. The latest comes from the *Australian Medical Journal*, which criticises the advertisement of a medical gentleman who styles himself "late assistant to the surgeon to the Queen." This is probably not a title conferred by official act, signed and sealed with due ceremony. Nevertheless, it has in part a familiar sound, and the *Journal* supposes that what is intended to be conveyed to the simple minds of the uninitiated general public is that the gentleman who thus describes himself was in the habit of running over to Windsor Castle, or up to Balmoral, when the Queen was a little out of sorts, and his principal was too busy or otherwise unable to attend in person. In our own country, the late lamented J. Marion Sims might with truthfulness have written "medical consultant to the crowned heads of Europe," but we never heard that he did it, or anything approaching to it. How would it sound for Bliss to say, "Surgeon in charge to his lately deceased Excellency, the President of the United States?" Would he say also, "by permission?" Let us not go too fast, however, in this criticism. The older members of the medical corps of the U. S. Army and Navy seem to have always been satisfied with the title of Doctor, but the younger men must

now be called Lieutenant and Captain, and the Majors and Colonels are not totally exempt. If the proposed bill to Congress from the Pharmaceutical Association is adopted we shall have to be careful to call the naval apothecaries Ensigns in the future.

THE PROPOSED FRENCH MEDICAL REGISTER OF THE WORLD—In the project for the construction of a medical library in Paris (*Union Medicale*), it is proposed to make a special register for the insertion of the names of all medical practitioners legally pursuing their profession throughout the principal countries of the world. It appears that the number of medical practitioners, spread over all parts of the globe, amount to 193,000, viz: United States 65,000, France 26,000, Germany and Austria 32,000, Great Britain and her colonies 35,000, Italy 10,000, Spain 5,000.

SOCIETY PROCEEDINGS

MINUTES OF SECTION SEVEN, ON DENTAL AND ORAL SURGERY, MEETING OF AMERICAN MEDICAL ASSOCIATION IN CLEVELAND, JUNE, 1883.

The Section was called to order by the Chairman, Dr Goodwillie, of New York, and the Secretary, Dr Brophy, occupied his position.

Dr Williams, of Boston, moved that a committee of three be appointed by the chair to whom all papers be referred before being delivered to the Permanent Secretary of the Association. Carried. The committee appointed were Drs Williams, Marshall, and Brophy.

REPORTS OF COMMITTEES

The report of the Committee on the appointment of dental surgeons in the army and navy was deferred until the ensuing session.

The Committee on food and its relations to the various tissues of the body were granted further time to report.

Dr John S. Marshall, of Chicago, read a paper on "Denudation or Erosion of the Teeth."

At the conclusion of the reading of Dr Marshall's paper, Drs Hayden and De Nickel, of New York, stated that Dr Goodwillie had not properly registered, and was not therefore qualified to preside at the meeting. They further stated that Dr Goodwillie had subscribed to the New York State Medical Society's Code of Ethics, in consequence of which a protest had been entered against his registering in this association.

Dr Goodwillie stated that he had registered, protesting himself against signing a pledge (which all members were required to sign) to abide by and support the Code of Ethics of the American Medical Association. He had been informed before leaving home that there would be no objection to his presiding over the Section.

A point of order was raised—namely, that the communication of Drs Hayden and De Nickel was non-official and consequently could not be received. The communication was subsequently made official

by Dr X. C. Scott, Chairman of the Committee of Arrangements, who also informed the Section that Dr Goodwillie's case had been referred to the Judicial Council.

Pending the action of the Judicial Council on the case, Dr J. L. Williams, who had occupied the chair while Drs Hayden and De Nickel were making their statement, was elected temporary Chairman.

The paper of Dr Marshall was then discussed.

Dr Shattuck reported a case of canine cyst in antrum which he successfully removed.

Dr W. W. Allport read a paper reporting a case of "Amaurosis Dependent on Dental Irritation."

At the conclusion of the discussion of the paper the Section adjourned.

Section called to order by the Chairman, Dr Williams.

In the absence of the authors of papers at the opening of the session Dr Marshall reported a case of pyorrhea alveolaris occurring in the practice of Dr W. W. Allport.

Dr Talbot reported a case of septicaemia resulting from alveolar abscesses.

At the conclusion of the discussion of these cases the Section adjourned.

THIRD DAY—JUNE 7

Dr Williams resigned the chair and Dr W. W. Allport, Chicago, was elected temporary chairman of the Section.

A paper on "Diseases of the Maxillary Sinus," by Dr Geo. L. Parmele, Hartford, Conn., was read by the secretary.

Dr Parmele's paper described the anatomical relations of the antrum of Highmore to the teeth, the nose, and the eye, directed attention to the consideration of the diseases of the teeth which affect it. Some of these are formidable, but most of those which come under the notice of the dentist are simple and easily cured, but if neglected or improperly treated they may assume so aggravated a form as to endanger the life of the patient, and we should so familiarize ourselves with the various manifestations as to be able to correctly diagnose and treat these cases. The principal diseases of this class are inflammatory distention of the antrum, dropsy or mucous engorgement, foreign bodies or wounds. The cause of inflammation of the living membrane, causing distention, can be traced in the majority of cases to a diseased condition of the superior molar and becupsids. Sometimes, also, it may be occasioned by the dentist facing irritating substances through the apical foramen in the treatment of devitalized pulps in teeth whose roots extend to the antrum. Blows upon the face or injuries in extraction may cause inflammation, or it may be an extension of catarrhal disease from the nasal cavity, or it may be set up by foreign bodies entering from without or from within the mouth. As a general rule, treatment is quite simple, over treatment in many cases retarding a cure. Often the mere extraction of a diseased tooth is all that is called for, generally the first molar, and if on doing this the antrum is not reached, the perforation of the cavity by means of the dental engine. Even in doubtful cases it is well to

perforate to ascertain what the contents may be. Some prefer perforating the alveolus above the gum but the opening should be at the lowest point possible. Vent should be maintained till the mucous membrane has regained its normal condition, and the cavity should be carefully cleansed with injections of tepid water, to which is added some antiseptic. Often this is all that is necessary, but sometimes frequent injections of tepid water followed by stimulating injections must be employed. Among the causes of mucous engorgement of the antrum are diseased teeth, exposure to cold, blows, etc. The first aim in treatment is to evacuate the contents of the cavity and remove the cause. The opening should be maintained with plate and tube until by the use of stimulating and astringent injections, the parts have regained their normal condition, when the opening may be allowed to heal. In case of wounds of the antrum the bleeding is always slight. The treatment is simply to remove any foreign body which may be present, and keep the parts clean and free from inflammation. In endeavoring to extract foreign bodies from the antrum, it should be remembered that the cavity is occasionally divided by partial septa of bone projecting from its walls, forming pockets from which the body can only be removed by introducing curved scooping instruments. This condition would also naturally interfere with thoroughly cleansing the cavity by injections.

Dr Allport related the case of a gentleman whom he met some months since, the side of whose face was badly swollen. Two or three surgeons, who examined the growth with the microscope, pronounced it cancer. The gentleman was shortly afterwards in Cincinnati, and called on an old dentist in Covington, who examined his mouth and found the floor of the antrum entirely removed, and with a bistoury made a free incision. The fetor was very strong and soon filled the whole house. With a scoop-shaped instrument he began to haul out of the cavity a substance about as hard as hard cheese, something like little worms, and kept on until nearly a teacupful had been removed. It took nearly an hour. At the end of two weeks the gentleman returned to Chicago. There were little reddish-blue patches on the inside of the antrum. The dentist who made the operation thought that he had demonstrated that there was no cancer, but Dr Allport had since been informed that cancer had appeared in the antrum.

Dr L. Buffet, Cleveland. The case just reported is right in the line on which the work of this Section ought to go. The trouble in the antrum had its origin in a local trouble, and was non-malignant at first. Undoubtedly it arose from the teeth, the watery portion of the infiltration into the antrum passing off, and the solid mass growing until the floor was entirely absorbed. The presence of the decomposing mass may have been the means of lowering the physical condition so as to permit the development of the cancer, if it was not inherited. If children are begotten by him after this they will have the cancerous diathesis, and by them it will be passed on to the generations. Cancer can be developed, if the cancerous diathesis is present, the same as scrofula can, by poor living.

Dr Shattuck recently had an interesting case of disease of the antrum. The patient's physician had been treating him for neuralgia, there was some enlargement of the cheek, and he found the left superior cuspid absent and the second molar badly decayed. He came to the conclusion that there was something wrong with the antrum. He extracted the decayed tooth, the extraction being followed by a free flow of pus. There was no trouble in passing the probe through the opening into the antrum, where it struck something hard, which proved to be the missing canine. On being removed, its end was found to be necrosed, and it was somewhat honeycombed. The cavity was injected with warm water and the parts readily healed.

The subject was passed

Section adjourned *sine die*

BOOK REVIEWS

LECTURES ON ORTHOPÆDIC SURGERY AND DISEASES OF THE JOINTS—Delivered at Bellevue Hospital Medical College, during the Winter Session of 1874-1875. By Lewis A. Sayre, M.D., Professor of Orthopædic Surgery and Clinical Surgery in the Bellevue Hospital Medical College, etc., etc., etc., etc. Second Edition Revised and Greatly Enlarged, with 324 Illustrations. New York: D. Appleton & Co., 1883.

It is seven years since the first edition of this work was issued from the press, and became familiar to a large part of the profession. In preparing this second edition for the press, the author has carefully revised and rearranged the entire work, rendering it more systematic and complete. The chapters on spondylitis and lateral curvature have been entirely rewritten. This thorough revision has not only rendered the present edition more methodical in the arrangement of topics and more full in their consideration, but it has corrected some errors in dates that had been found in the first. Many pages of new matter and fifty-two new and excellent illustrations have been added to the present volume. The work embraces thirty-two lectures, originally delivered in the amphitheater of the Bellevue Hospital Medical College, in which are discussed and illustrated the following topics: History of Orthopedy, Deformities, Malformations, Talipes, Diseases of the Joints, Diseases Which Simulate Diseases of the Joints, Ankylosis, Diseases and Deformities of the Spine, Deformities Resulting from Paralysis, and miscellaneous topics, as Corns, Bunions, Ingrowing Toe-Nails, Hallux Valgus, and Displacement of Joints. The second topic occupies four lectures, the third, one, the fourth, five, the fifth, twelve, the sixth, two, the seventh, two, the eighth, two, the ninth, two, the tenth, one. From the general topics named, and the number of lectures given on each, the reader will see that they embrace the whole field of orthopædic surgery, and in no one volume will he find a more thoroughly practical discussion of each topic, or plainer and safer rules for his guidance in practice. If the zeal of the author sometimes gives

to a lecture a controversial tone, it only serves to enliven the reader and increase the activity of his thoughts. Like all who become leaders in any department of human life, instead of followers, the author's inventions and novel methods for the treatment of many important diseases and deformities, have made him, at different times, the subject of severe criticism. But his genius, sustained by a boldness and industry possessed by only a few, has enabled him to overcome all obstacles, and to have accomplished more than any other one man in placing the department of orthopædic surgery in the prominent position which it now occupies before the profession.

The present volume is fully illustrated throughout, not only by a large number of excellent cuts and photo-electrotype engravings, but by numerous, well-selected cases, embracing almost every variety of orthopædic disease and deformity. It is consequently well adapted for the use of both students and practitioners. The volume is a full-sized octavo, containing 569 pages, executed in the usual good style of the well-known publishers, and its contents will remain a monument to the genius, industry and zeal of the author, more durable than shafts of marble or pillars of granite.

REPORTS FROM THE CONSULS OF THE UNITED STATES ON THE COMMERCE, MANUFACTURES, ETC., OF THEIR CONSULAR DISTRICTS No 32 August, 1883. Published by the Department of State, According to Act of Congress.

There is generally something of professional interest to be found in these reports, and in the present number there is a report by Consul Tanner, of Liege and Verviers, on American Proprietary Medicines in Belgium, the tone of which is not very pleasing to the American medical practitioner. Consul Tanner is evidently doing all he can, and with self-commendation for his efforts, to introduce patent medicines abroad. He incloses an advertisement (not given) in the form of an American flag, $3\frac{1}{2}$ by $6\frac{1}{2}$ inches, with the reading matter (in French) on the white stripes, extolling Hop Bitters, which he says is distributed throughout the city and handed to every passer-by. He says "Since my dispatch No 27 I am glad to see other familiar medicines in the windows here, among them Allen's Hair Vigor. An idea pervades people that things that are foreign possess superior virtues to those found at home, and this is as much the case in Belgium as in the United States, therefore the foreign name is a recommendation. Dispatch No 27, in addition to the letters written to this consulate, occasioned a visit from Mr Charles Delacré, a well known pharmacist of Brussels, who deals extensively in patent medicines, both American and English. He had a plan to mention by which American medicines might be introduced, which I asked him to write out for me, and I would submit to the Department, which I herewith enclose." Consul Tanner goes on to recommend Mr Delacré to the American dealer, and Mr Delacré's letter is a purely practical one as to the best and most thorough means of advertising what he recognizes in so many

words as the two classes of proprietary medicines. The first, such as may address the medical body, viz Lactopeptine, Maltine, Dr Fellows' Hypophosphites, etc., and the second, such as may address the public, as Hop Bitters, Mother Siegel's Syrup, Perry Davis' Pain Killer, Holman's Pad, etc.

The report of Consul Stahel, of Osaka and Hiogo, Japan, on the Tea Trade of Japan, is full of interesting matter concerning the widespread and injurious adulteration of tea.

Consul Welsh, of Florence, refers to olive oil, pure and adulterated. "The adulteration of olive oil in Italy has long been known to exist, and cotton oil has been so freely imported from the United States for that purpose that the Government has largely increased the duties thereon, the law of May 30, 1878, having fixed a duty of 6 livre per quintal, and the law of April 7, 1881, having established a duty of 20 livre per quintal." Prof Commendatore Bechi, Director of the Technical Institute and of the Agrarian School, has the following test: 1 grain of crystallized nitrate of silver dissolved in 100 cubic centimeters of alcohol 98°, and it is applied as follows. In a glass bulb place 5 cubic centimeters of the olive oil to be tested, add to this 25 cubic centimeters of alcohol 98°, then add 5 cubic centimeters of the test. Place the whole in a water bath, temp 151° F. After half an hour's immersion the oil, if injured, becomes of a dark, muddy color, and with practice and caution the actual proportion of the adulterating liquid can be determined. This test is based on the essential quality possessed by the glyceride of the cotton oil to reduce the nitrate of silver.

Consul Roosevelt, of Bordeaux, presents a report on the adulteration of wines in France, consisting in part of extracts from the French journals discussing the subject, which gives it a certain interest to medical men. The other reports in the volume serve as interesting reading on general topics.

MINUTES OF THE STATE MEDICAL SOCIETY OF ARKANSAS AT ITS EIGHTH ANNUAL SESSION Little Rock 1883 810, 115 pp.

This is a well printed volume, containing material which is confined for the most part to discussions on medical legislation and medical education, and to reviews of the progress of medicine. Such papers on cases and personal experience as were read during the session, are referred to by title only. The Board of Visitors to the Medical Department Arkansas Industrial University report favorably on the thoroughness of instruction imparted and the standard of examination. The number of matriculates for the session of 1882-83 was thirty-two, of which number four were candidates for graduation. Dr Z Orto, as Chairman, presented an interesting report on State Medicine. 208 names are borne on the list of members.

FIFTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF KENTUCKY, 1883.

Those who have watched the progress of State medicine during the past year have doubtless noted the difficulties under which the State Board of Health

of Kentucky has labored. Of the six members of the Board (all physicians) two have habitually absented themselves from all meetings of the Board, and withheld their aid in all its undertakings. The cause of this seems to lie in simple lack of interest rather than any disaffection on the part of the non-conforming members.

In the selection of its secretaries, the Board has been, to say the least, unfortunate. When first organized (in 1878) a secretary was elected under circumstances which necessitated his retirement in order to avoid the odium of public scandal and criticism. He was succeeded by another physician, who, after three years' tenure of the office, was requested to resign. In consequence of a lack of harmony between the Board and its secretary, and an apathy in the discharge of the executive duties of that office, the affairs of the Board have gone on badly. At the last session of the General Assembly of Kentucky, a bill to double the very small annual appropriation of the Board (\$2,500) failed of passage. When, soon afterward, the medical and secular press began to direct public attention to the scanty work accomplished by the Board, this organization was seriously embarrassed. The secretary made no response. The annual report for 1882 was meager, and, in many parts, full of errors. At this time the really efficient and able members determined to actively take the affairs of the Board into their own hands, and make its work scientifically valuable and practically useful. A committee was appointed to enquire into the adulteration of foods and medicines and employ expert services in its investigations. The subject of school buildings and their proper ventilation was referred to another member, with instructions to appoint a sanitary inspector to inspect and report upon the sanitary condition of the public school buildings and asylums of the State. It was decided to elect Dr J. N. McCormack, of Bowling Green, an accomplished and thoroughly practical physician, secretary, which was formally done at the recent quarterly meeting of the Board. With these auspices of new activities in anticipation, the fifth annual report comes to our table.

The volume opens with a list of the County Boards appointed by, and in connection with, the State Board. The act of the legislature establishing a State Board of Health, together with the amendments to that act which have been adopted, are given in full. The Secretary's report contains a number of letters from physicians in various parts of the State, relative to the health of their respective communities. The report also includes editorial articles relating to prevailing diseases and sanitary precautions from several newspapers, and a communication from the Secretary, Dr J. J. Speed, to the daily *Courier-Journal*. It is difficult to comprehend the purpose of inserting these articles, containing interviews with physicians, and other clap trap usually found in such communications in the official report. Dr J. W. Holland, a member of the Board, contributes an article on "Mortuary Statistics," in which he points out the defects in the method of collecting these data, and the injustice done the Board

in holding it responsible for evidence gathered by county assessors. Dr Holland, as a special committee on the "Adulteration of Food and Medicines," being unversed in practical chemical analysis, secured the aid of Dr J. B. Marvin, of Louisville, a skilled practical chemist and microscopist, to examine and report upon the comparative value of the several malt preparations offered the profession. Prof Marvin is well known as a pains-taking and trustworthy investigator in every detail of chemical analysis, and hence the value of his report upon this important class of constructive medicines. The preparations of malt, both plain and in combination with other medicinal agents, have, in consequence of their digestive and constructive properties, deservedly won a high place among therapeutic agents. It is well known that the digestive agent in these preparations is diastase, the principle which converts starch into glucose, and hence the merits of any given malt extract depend upon the activity of these diastatic properties. Prof Marvin obtained, from a well known wholesale house, bottles of each of the following brands: Trommer's, Maltine, Keasbey & Mattison's, John Hoff's (imported), John Hoff's (Tarrant's), Liebig's, and Shaker's Aromatic Extract. After applying the test most carefully under identical conditions, he places the Trommer extract at the head of the list having found it to possess most active diastatic properties. Keasbey & Mattison's preparation, he says, behaved in a similar manner, and these two preparations alone were found to possess the power of digesting starch. Maltine failed to respond to the test, and at the end of several hours gave no evidence of the desired qualities. The other preparations, also—Hoff's, Liebig's, Horlick Dry Malt Extract, and Shaker's—utterly failed to digest starch. Prof Marvin concludes by stating that "to prescribe malt extract at its present price, and obtain a sample which contains no diastase, is to pay very dearly for malt sugar and extractives from barley." The expert services of Prof Marvin were also secured for a report upon "Illuminating Oils." The results of testing five samples of oil in common use for illuminating purposes are given, together with the restrictions which should be made upon the sale of these dangerous agents. This is one of the most valuable features of the report.

Prof C. Lewis Diehl, of Louisville, the well known chemist and pharmacist, in conjunction with Prof Holland, made an analysis of six popular brands of sulphate of quinine, the results of which are accurately reported. Our limited space prevents a synopsis of this important investigation.

Dr R. W. Dunlop, of Danville, a member of the Board, contributes a brief article on School Sanitation, in which he points out the dangers of propagating contagious diseases when a large number of children are gathered together from day to day. He also directs attention to the importance of observing the well-known principles of light and ventilation for the health and development of the inmates of school rooms. He concludes with a plea for good light, pure air, short school hours, no crowding, and mild discipline. This is an excellent and thoroughly prac-

tical paper For inspection of the public school buildings and asylums of the State, Dr Dunlop secured the services of a sanitary inspector, Prof L Eddy, of Danville, whose scientific attainments and mature experience furnish special qualifications for the task assumed An examination of Prof Eddy's report shows a thorough comprehension of the principles involved in heating, draining, ventilating and furnishing water to large public buildings, and also gives evidence of a conscientious accuracy in all the work undertaken This paper represents a great deal of labor, including personal inspection of the insane hospitals, the schools for the feeble-minded and deaf-mutes, and the public school buildings in all the principal towns of the State The report concludes with an admirable paper upon the principles of ventilation, particularly as applied to school buildings

Dr J N McCormack, of Bowling Green, a member of the Board, relates how an epidemic of small-pox was controlled in Edmonson county, and contributes a paper entitled, "A Sanitary Survey of Bowling Green" This paper is quite sufficient to fix Dr McCormack's reputation as a sanitarian While of local interest for the most part, it illustrates in an admirable manner the principles of sanitation as applied to towns The paper is a model of its kind It is replete with information, and shows throughout an abundance of practical knowledge It is illustrated with an instructive map, showing the geological formation, elevation above the river, and the points of prevalence of epidemic diseases Dr McCormack's paper gives the result of chemical and microscopical analysis of the water supply, with suggestions relative to the important matter of sewerage We cannot but repeat this sentence "In such matters as the sewerage and water supply of a town, the authorities are the most convenient agents of the individuals, but on most points sanitation, like religion, is a personal matter, and each individual, or each household has a work to do which cannot be done by others"

Dr Pinckney Thompson, of Henderson, the President of the Board, contributes to this volume a readable paper on "The Causes of Typhoid Fever" Dr Thompson is a practitioner of ripe experience, and has written this paper after a thoughtful observation of the disease, and an investigation of recent writers upon the subject He denies the specificity of enteric fever, and endeavors to prove that the decomposition of animal and vegetable matters generates a poison capable of producing typhoid fever Dr Thompson thinks that if the now accepted views of the pathogenesis of typhoid are correct—that each case results from the poison of a previous case of the disease—it would be a *scandalum magnatum* upon the profession if the disease were not quickly exterminated It is quite evident that Dr Thompson's enthusiasm upon the vital principle of cleanliness as a sanitary measure, has overcome his impartial consideration of evidence in this intricate pathological inquiry With increasing experience in the investigation of the origin of epidemics of typhoid, outbreaks which cannot be traced to the introduction of the specific poison become more rare, and fewer obser-

ers are found to support the views of Murchison, as adopted in Dr Thompson's paper There is overwhelming evidence that the poison is always and invariably derived from some previous case, and the only facts which appear to indicate its independent origin, are occasional outbreaks of the fever in villages or isolated districts, which cannot be traced On similar grounds the *de novo* origin of small pox and all the well known specific contagions could be proved

In addition to the papers above noticed, the volume contains articles from Dr Arch Dixon, of Henderson, on the "Duty of Physicians to the State Board of Health", and by Dr W M Fuqua, of Hopkinsville, on "Small Pox" Both of these contributions are interesting

This volume contains an article by Dr J G Carpenter, of Stanford, with this very pretentious title "A Report of the Diseases of Stanford and Vicinity, their Causation and Mortality and of the Local Board of Health of Lincoln County" In a space of less than five pages this portentous subject is disposed of It would be difficult to find in an equal space a more conspicuous exhibition of inaccuracy of pathological knowledge in general and as applied to vital statistics, together with a more total disregard for grammatical language The extraordinary statement is made that "muco purulent ophthalmia, epidemic and contagious," ranked third in degree of prevalence in a community situated in a fine temperate climate, and engaged for the most part in agricultural pursuits The expressions, "malarial typho," and "infantile diarrhea," and the statement that "diphtheria was sporadic," will convey an idea of the reckless manner in which words are coined and applied by this writer The writer does not give the source or method from which his data were obtained, but deals with the extent and character of prevailing diseases in a large county during an entire year in the most dogmatic and self-assured manner The paper is utterly worthless, and one is at a loss to understand how it was admitted to a volume containing so many valuable articles Indeed one must suppose, from a perusal of this paper, that the Board has as yet put no restriction upon the character and extent of voluntary communications

We hope this Board will be strengthened by judicious appointments on the part of the Governor of Kentucky, during the approaching session of the General Assembly, and that having passed the ordeal of five years' experience, it will enter upon a career of renewed usefulness to the public, creditable alike to itself and the cause of State medicine in America

DOMESTIC CORRESPONDENCE

WASHINGTON LETTER

The medical schools of Washington are now in full operation for the winter, with fair classes Clinics are given at the Providence Hospital, Children's Hospital, and Central Dispensary

Prof J Ford Thompson has returned from Europe, where he spent considerable time in following the

practice of the Germans, and has resumed charge of the Chair of Surgery in the National Medical College (Medical Department Columbian University), and gives regular clinics at the Children's Hospital.

Surgeon-General J B Hamilton, United States Marine Hospital Service, has been appointed to the Chair of Surgery in the Medical Department of the Georgetown University, and gives clinics at the Providence Hospital. Prof Hamilton lectured on Surgery at the National Medical College during the winter of 1882-83, during the absence of Prof J Ford Thompson, and now takes the place of Dr Beale, who has resigned.

Dr Frank Baker, formerly Assistant Demonstrator and Prosector of Anatomy to the National Medical College, now fills the Chair of Professor of Anatomy in the Georgetown University Medical Department.

The Societies began their regular meetings with October. The Medical Society of the District of Columbia meets weekly.

On September 26th Dr W H Taylor read the notes on *A Case of Opium Poisoning Treated Successfully by Atropia and Caffein Hypodermically and Artificial Respiration*.

The subject was a woman of 45 years of age, who took a half ounce of laudanum at 3 P M. She was first seen at 5 P M, when she was insensible, pupils contracted to a pin's point, conjunctivæ not responding to irritation, pulse rapid and small. Administration of zinc sulphate and application of cold water had no effect. At 5 40 P M respiration 6 per minute, pulse 118. Atropia sulphate $\frac{1}{100}$ grain hypodermically. At 5 50 atropia sulphate $\frac{1}{53}$ grain, respiration 2, pulse 136. At 5 54 atropia sulphate $\frac{1}{53}$ grain, respiration ceased for over a minute, pulse could not be counted, action of heart very rapid. Applications of cold water and artificial respiration. In a few seconds respiration recommenced. Caffein one grain hypodermically. At 6, respiration 8, pulse 120. At 6 10, caffein one grain, respiration 12, pulse 128. At 6 23, atropia sulphate $\frac{1}{53}$ grain, respiration 9, pulse 128, swallows and sensible to outward impressions, pupils begin to dilate. At 6 40, caffein $\frac{1}{2}$ grain, respiration 7, pulse 126. At 7, natural sleep.

In the discussion which followed Dr Reyburn said he had succeeded with nitrite of amyl in a child three months old, which had become thoroughly narcotized.

On Oct 17, Dr Joseph Taber Johnson presented the ovaries and fallopian tubes which he had removed from a young lady seven days before. The patient was 21 years of age, and had presented for several years the characteristic symptoms of chronic ovaritis. After nine years of painful menstruation, and four years of unsuccessful treatment, the operation was performed, and the patient is now doing very well, having a pulse of 88, and a temperature of 100.4. In a case operated on a year ago last August by him, both ovaries and one tube were removed, but the patient had menstruated with the greatest regularity ever since the third month after the operation. In accordance with the theory of Lawson Tait, he had removed as much of both tubes as he could, in the hope of establishing a permanent change of life.

Oct 31, Dr S O Richey read a paper on Atropia.

Nov 7, resolutions were passed and remarks made upon the recent death of Dr W G H Newman, viz

WHEREAS, The Medical Society of the District of Columbia has heard with deep regret of the death of Dr W G H Newman, one of its oldest and most esteemed members

Resolved, That by the death of Dr Newman, the profession has lost one of its most earnest and efficient practitioners, and the community one of its most respected and valuable citizens.

Resolved, That the zeal and devotion with which he discharged his professional duties, without regard to the wealth or position of his patients, are deserving of the highest praise and commendation.

Resolved That the members of this Society tender their heartfelt sympathy to his family in their sad bereavement, and that they will attend his funeral in a body.

Dr D R Hagner spoke of the traits of character of Dr Newman, as a true and loyal friend, and as a constant and laborious worker among the poor without the slightest hope or thought of pecuniary reward. Born in Maryland, in 1827, he was a student under Dr Nathan R Smith, of Baltimore, and a medical graduate of the University of Maryland in 1849. A practitioner of medicine in the District of Columbia for thirty-four years, he held several offices of trust—Physician to the Poor, Member of the City Council, of a former Board of Health, President of the Board of Visitors to the Washington Asylum, for twenty-one years consecutively Surgeon of the Police, and for fifteen years Chief Physician to St Anne's Infant Asylum. Latterly, he has been one of the consulting staff of Providence Hospital. He died of malignant disease of the pylorus, but retained his hold upon his active practice and the affections of his patients to almost the last moment. Dr Hagner feelingly described the father and husband taking him up in their arms to the bedside of their suffering loved ones.

Other remarks were made by Drs Johnson Eliot, Louis Mackall and D J Kelly, which confirmed and enlarged upon Dr Hagner's high estimate of Dr Newman as a man and physician.

LETTER FROM WASHINGTON

The annual report of Columbia Hospital for Women, and Lying-in Asylum has been submitted to the commissioners of the District of Columbia by the Surgeon in charge, Dr P J Murphy. The report of the President, Mr William Paret, refers to the evidences of good management and skillful treatment presented by the absolute freedom from deaths in the many cases of child birth, and the minutely small proportion of deaths from other causes.

Dr Murphy's report states that four deaths only are recorded as occurring in the medical and surgical wards, and in the lying-in wards no maternal death is recorded. There were one hundred and thirteen children delivered, which, with the one hun-

dred and fifty-six of last year, makes a total of two hundred and sixty-nine deliveries (instrumental, preternatural and natural) without a single maternal death. There has been no case of puerperal fever in two years, and no case of gathered breast in the last one hundred and thirteen deliveries. The infantile mortality reached only three as against four for the preceding years.

The report of Columbia Hospital dispensary for the fiscal year shows a total of five hundred and ninety-eight treated during the year, and forty-seven under treatment at present. Prescriptions compounded, one thousand five hundred and two.

The report of the Treasurer, J. T. Mitchell, shows that the amount of appropriation from the general government was \$15,000, and the amount received from pay patients \$9,215 22, the average daily expenditures being \$54 51½, and the average cost per diem for each patient \$1 78. He mentions the completion of the west wing of the hospital building, for which Congress, in August, 1882, appropriated \$10,000.

The weekly meeting of the Medical Society of the District of Columbia was held on Nov. 14th. Dr. W. W. Johnston presented an interesting specimen of myoma of the uterus, and read the history of the case. Dr. H. R. Bigelow read an exhaustive paper on Points in Connection with the Pathology, Ætiology and Diagnosis of Myo-Fibromata of the Uterus. In the discussion which followed, Dr. Reyburn stated that from the statistics gathered by the chief physician of the Freedmen's Bureau, between one-fifth and one-fourth of the cadavers of colored females beyond the age of thirty years, were found to contain uterine tumors.

J. MARION SIMS, M. D.

DR. N. S. DAVIS, EDITOR JOURNAL AMERICAN MEDICAL ASSOCIATION

At the annual meeting of the Æsculapian Society of the Wabash Valley, held at Paris, Ill., Nov. 21-22, the society having under consideration the death of Dr. J. Marion Sims, of New York, Dr. John Morgan McKown, of Arcola, Ill., offered the following tribute to the memory of the distinguished surgeon, which, by vote of the society, was ordered published in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

C. B. JOHNSON,

CHAMPAIGN, NOV. 30, 1883

Sec. Æsculap. Soc.

Death, which respects neither attainments, nor rank, nor usefulness, nor genius even, has laid his pallid hand on one of the gifted ones of earth, and we mourn with dimmed eyes and troubled hearts a great man fallen. J. Marion Sims is dead! That active intellect, acute, grasping, alert, commanding, will never be felt again among the thinkers of earth, except in the priceless legacy of its great achievements. Wherever civilization has come, wherever genius is loved, wherever the beneficent offices of the healing art have blessed the homes and sweetened the lives of men, wherever the dignity and the grace and the sweetness of woman have had their

charm for the heart and the life of the race—there will the death of J. Marion Sims bring the tribute of a sigh or a tear. Full of years, full of usefulness, full of honors, he has lain down to needed rest.

Whatever distinction other sons of New York may have gained in the stern struggle of life, in all the elements of a man, J. Marion Sims stands the peer of any who ever trod her soil. Versatile, magnetic, brilliant, with a voice whose every cadence was a charm, he moved among men a rare and gracious presence, and to woman was a perpetual wonder and benediction. Rescuing her, by his industry, his love, his ceaseless devotion to the high demands of his art, and by his genius, from the awful catastrophe of a blighted life and a miserable death, is it strange that she should go to his tomb with something of the sorrow and adoring love with which Mary went to the sepulcher of the Nazarene?

But why multiply words? No voice from this society can call back the radiant spirit of our dear, dead friend, or add to his essential glory. His life lives green in the memory of his professional brethren, and with them he needs no eulogy. Whatever carping criticism, whatever asperity, whatever unkindly feeling there may have been, in any quarter, while this strong and daring personality was doing its ceaseless work, "the grave buries every resentment." To us, now that the clods of earth cover his bosom, and we have his memory only, he stands the embodiment of skill and devotion and genius. And to the world he will always stand, in some sense,—in a largesense, indeed,—as the representative of what is highest and best and truest and sweetest in our calling.

"His life was gentle, and the elements so mixed in him, that nature might stand up and say to all the world, *this was a man!*"

THE PULSE AFTER HANGING.

MARYVILLE, TENN., NOV. 28, 1883

PROF. N. S. DAVIS, M.D., EDITOR

On the 23d inst., Andy Taylor was executed or hanged at Loudon, Loudon County, Tenn. Being one of the physicians appointed to be present at the execution, I took the following notes. Pulse after the rope was adjusted, 121, first minute after the drop, pulse 54, second minute, 52, third minute, 39, fourth minute, 20, fifth minute, 0, sixth minute, 70, seventh minute, 73, eighth minute, 0, ninth 34. After this no pulse was perceptible, neck not dislocated, died from strangulation. The heart beat the nineteenth minute one time, and two or three times only from the ninth to the nineteenth, when life was extinct. No priapism produced. Drop fell at 3 15 P. M., the body was cut down in thirty minutes. I send you the above items, thinking that they would be of some interest to the profession from a physiological standpoint. I am, very respectfully,

JOHN P. BLANKENSHIP, M.D.

NECROLOGY

SIMS, JAMES MARION, M D, of New York, was born in Lancaster District, South Carolina, January 25, 1813, died suddenly of heart disease at his residence in New York, November 13, 1883. He was a descendant of the great Scottish chieftain Rob Roy McGregor. His birth place was in the vicinity of the dividing line between North and South Carolina, near where General Jackson first breathed life. Having received a good education at the common schools by the aid of private tutors he also became well grounded in the classics and studied French, which he wrote and spoke with readiness. At a proper age he entered and graduated in letters from the South Carolina College in 1832. His medical studies were pursued in Charleston, S C, and then in Philadelphia, Pa, where he received the degree of M D from Jefferson Medical College in 1835. The following year he began practice near Montgomery, Ala, and the following year moved to the city, where he acquired a large and lucrative business. In 1845 he communicated to the profession some new views on "*Erismus nascentum*," which he published in the *American Journal of Medical Sciences* 1846 and 1848. In 1845 his attention was especially called to the gravity and frequency of vesico-vaginal fistula, which, previous to that time, had been deemed incurable. He conceived the idea of relieving it by a surgical operation. To this end Dr Sims established at Montgomery a private hospital in which he received patients suffering from this accident and after many efforts and modified procedure, instruments, and operations in 1849 fully established the fact to the profession that his operation was a success. The devotion and earnestness with which he pursued this branch of surgery led by necessity to invent a number of new instruments and devices to accomplish the desired results, some of which bear his name. Among which are the speculum, the use of the silver wire sutures which would become sagulated, instead of the silken thread, was of itself a great factor in the success. Subsequently he used this silver wire suture in all operations in which the suture was required. His health failed in 1850 and in 1851 while confined to his bed by a severe and protracted indisposition, which he and his friends feared would terminate in death he wrote his famous paper, "Sims' Operation for Vesico Vaginal Fistula," which was published in January, 1852, in the *American Journal of Medical Sciences*. The good results which he obtained in his hospital for the special treatment of diseases and accidents peculiar to women, reports of which were published in the *Medical Journal*, speedily awakened among medical men much interest, and patients were sent to consult Dr Sims from all parts of the country.

A change of climate on account of his health as well as to find a larger field for professional work, led him to settle in the city of New York, in 1853. Although his health was not fully restored, yet with the encouragement of some of the leading physicians, within a year he commenced the founding of a Womens' Hospital in that city, which, through his

energy, efficiency, eminent surgical skill, and under the patronage of some forty of the first ladies of New York, soon became an established fact. To bring the subject directly before the profession of the city of New York he delivered a convincing address upon the needs of such a hospital to a large audience in the old Stuyvesant Institute. A committee of physicians were at once appointed to assist in accomplishing the object. An appropriation of \$25,000 was obtained, which, with the funds raised by the ladies, a house was rented for temporary use on Madison avenue, and the hospital opened in May, 1855. Dr Sims was elected attending surgeon, and Drs Alcott, Stevens, Francis, Delafield and Green a consulting board. The institution was immediately filled with patients from all parts of the country. The success attending the treatment of patients, and the important operations performed in it speedily demonstrated its usefulness and the need for an enlarged establishment.

During the session of the New York Legislature in 1857 and 1858, Dr Sims obtained a charter for the "Woman's Hospital for the State of New York," and obtained from the city 80,000 feet of ground for hospital purposes near Central Park, opposite Columbia College, and an appropriation of \$10,000 to assist in its construction. Dr Sims made a careful study of the merits of different kinds of hospitals and plans, and finally adopted the pavilion system as the most satisfactory and best suited to his purposes. The first pavilion containing 70 beds was completed and occupied in 1866. Largely through Dr Sims and the merits of the hospital State aid at different times, to the amount of \$60,000 was obtained for the institution. A second pavilion was opened in 1876, and the combined capacity of the pavilions was 260 beds. This hospital is at once a monument to Dr J Marion Sims, and to humanity and medical progress of the age. In 1861 he (Dr Sims) visited Europe, chiefly to study hospital construction and their sanitary requirements. His coming was everywhere heralded, and he received from the profession in all the larger cities and hospitals such a welcome as has rarely or never been given to a medical man. He was solicited to operate in many of the leading hospitals, and by surgeons who themselves enjoyed a world-wide reputation. London, Paris, Dublin and Brussels were each in turn the theater of his surgical triumph, and which renewed reputation in many and different hospitals. His successes were so noted and brilliant that he speedily received decorations from the Government of France, Italy, Spain, Portugal and Belgium as a public benefactor. From France he received the "Order of the Knight of the Legion of Honor," and from the Belgian "The Order of Leopold."

In 1862, after a brief stay at home, he returned to Europe to place his children at school, but with the intention of returning to his practice in New York, which had grown to be large, responsible and remunerative. But as soon as it was known that Doctor Sims was in Paris patients flocked to him in such numbers, from all over the world, as to fully occupy his time which rendered it next to impossible for him to elude promise of treatment and relief. It

was not till 1868 that he again returned to New York and resumed his practice, his family remaining in London. In 1870 he was in Paris at the opening of the Franco-Prussian war and was the means of organizing what is known in history as the "Anglo-American Ambulance Corps," and was made its surgeon-in-chief. The organization did good service at and after the battle of Sedan. He was placed in charge of a hospital with over 400 beds and served faithfully and effectively for a month, when he resigned the place. He was one of the escort which attended Marshal McMahon from the field when wounded by a shell. The incident was gracefully remembered and acknowledged by the Marshal giving them a thousand francs to purchase delicacies for those confined in the hospital. The account or report of the services of the operations of the Anglo-American Ambulance Corps was made by Dr Sims' first assistant, Wm McCormack, now Sir Wm McCormack, and published, in London, in 1870. I am unable at this time to give a full list of Dr Sims' contributions to medical literature. Whenever he wrote he had something to say which the medical profession was ready and anxious to hear. So able and original an exponent of the art and principles of medicine was sure of an answer. Besides the two papers which have been noticed and which brought him at once so prominently before the profession he wrote on "Silver Sutures," in surgery, "Clinical Notes on Uterine Surgery," "Intra-Uterine Fibroid Tumors," "Microscope in Sterile Condition," "A Treatise on Craniotomy," and a "History of the Discovery of Anæsthesia" and his "Centennial Address" as President before the American Medical Association in 1876. In addition to these he was a frequent contributor to the current medical journals. Dr Sims was an active or corresponding member of many medical societies at home and in Europe, besides being an honorary member of numerous medical and scientific societies. He was a member of the Alabama State Medical Society, the New York State Medical Society and the New York Academy of Medicine, the New York Neurological and the New York Pathological and Surgical Societies. Honorary member of the Connecticut, Virginia, South Carolina and California Medical Societies. Dr Sims became a member of the American Medical Association in 1858 as a delegate from the "Woman's Hospital of New York." He attended the meetings in 1860, 1872, 1874, 1875, 1876, 1877, and 1880, and was President in 1876. Dr Sims has made some valuable communications to this Association, which may be found in its Transactions.

He was also a member and President of the American Gynecological Society, and has contributed ably to its Transactions. His skill and eminence in the obstetrical art led to his engagement to attend the accouchements of the Empress Eugene, of France, and also the Empress of Austria. His practice in Europe was largely among the nobility, from whom he received large fees and valuable presents.

The doctor visited Washington City a few weeks ago and bought a most elegant site for a residence on Sixteenth street, and looked forward to a home in

this city, where he should retire from active practice. He was then in apparently good health, and certainly looked remarkably well, but spoke of the necessity of his being careful as to diet and exposure. Wishing to avoid the rigor of the winters, he proposed to visit Italy, and had anticipated a delightful sojourn of two or three months in Rome.

Some three years since, Dr Sims suffered from a severe attack of pneumonia, since which time he has found that he suffered in cold weather. Hence, for the past two years he has spent the winter months in the south of France and in Rome, and the rest of the year in other parts of Europe, France, and the United States.

Dr Sims was united in marriage Dec 21, 1836, to Eliza Theresa, daughter of Dr Bartlett Jones, of Lancaster, S C, who, with seven children, survives him. His son, Harry Marion Sims, is in active practice, and most abundantly and worthily inherits the ability and skill of his father, whose memory the whole medical profession loves to honor, for by his genius, and devotion to medical science and art he advanced it in its resources to relieve human suffering as much, if not more, than any man who has lived within this century. Doctor Sims's funeral takes place from Madison Square Presbyterian church on Friday—a church in which he was one of the oldest pew-holders.

Peace to his ashes

J M T

THE CHICAGO THROAT AND CHEST HOSPITAL—ITS ORGANIZATION.—A meeting was held yesterday at the residence of the Rev Dr Wm M Lawrence, to organize a Chicago Throat and Chest Hospital, and the following named gentlemen were chosen directors. The Hon Wm Aldrich, the Rev Dr Wm M Lawrence, Dr E Fletcher Ingals, Dr G F Hawley, the Hon C C Kohlsaat, W Howard, and Hermon Kohlsaat. The object of the hospital, like its namesake of London, England, and others on the Continent, is to offer opportunities of treatment to those who are unable to employ a physician, but are still unwilling to be considered objects of charity. The hospital will consist of an outdoor department where patients will be treated daily, and of an indoor department where patients will be cured for by experienced nurses under the direction of the attending physician. No physician is to accept a fee from any of the patients, or from the institution. We have already made ample provision for in-patients who are able to pay for board only. We hope to have the out-patient department in working order in about two weeks.

NOVEMBER 25, 1883

A SANITARY CONVENTION will be held under the auspices of the State Board of Health, in the city of Ionia, Michigan, Thursday and Friday December 13 and 14, 1883. Officers of the Convention President, Rev J Pierson, D D, Secretary, Alex W Dodge, Ionia, Assistant-Secretary, Erwin F Smith, Lansing. Reduced fares on railroads may be obtained by applying for certificates to the Secretary of the Convention.

PHOSPHORUS AS A REMEDY

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PHOSPHORUS has recently been prescribed with great advantage in cases of extreme debility and mental depression, from prolonged anxiety, or excessive excitement, also, in nervous prostration from overwork, especially brain-work. It is recommended in cases which are attended with great prostration of the vital powers, in exhausting diseases, such as Cholera, Diphtheria, and the latter stages of Typhus and other Fevers, etc. In Epilepsy, Epileptiform-Vertigo, Melancholia, Softening and some other diseases of the Brain, it has been given with marked benefit, also in Neuralgia, Tuberculosis, and Scrofula, in chronic and inveterate diseases of the skin, Leprosy, Lupus, and Psoriasis. Dr Burgess recommends it in Pruritus Pudendi and other forms of Pruritus.

PHOSPHORUS, STRYCHNINE, AND IRON, combined in the proportions above indicated, is a safe and valuable remedy. As a nutritive tonic and stimulant to the nervous system, especially the spinal cord, it is admirably adapted for the treatment of a large number of nervous disorders dependant on defective nutrition and debility. It increases the appetite and promotes digestion. It may be safely given in all those cases in which hypophosphites are employed. It is strongly recommended in *Consumption, Neuralgia, Atonic Dyspepsia, Lowness of Spirits, General Debility*, and in that general condition of depression and loss of power popularly known as *below par* and in *breakdown* from overwork and mental fatigue.

DIRECTIONS: Take one Pill, with breakfast, dinner and tea every day until 100 pills have been taken, when it would be advisable to leave off taking the Pills for a week, and then resume them every second day. Should digestive troubles intervene, suspend their use for a few days or give less frequently.

THE PILULAR FORM is deemed to be the most desirable for the administration of Phosphorus. In Warner & Co's pills the Phosphorus is in a perfect state of subdivision and is not oxidized. *Warner & Co discovered and brought to perfection this method of preparing Phosphorus for medicinal use.* It is presented in its elementary state, free from those repulsive qualities which have so long militated against the use of this potent and valuable remedy. These pills possess the necessary qualities of purity and definite strength, are small in bulk, and are perfectly tasteless.

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1st Complete rest of mind, especially, abstention from all occupations resembling that upon which the mind has been overworked.

2d The encouragement of any new hobby or study, not in itself painful, which the patient might select.

3d Tranquility to the senses, which expressly give in these cases incorrect impressions putting only those objects before them calculated to soothe the mind.

4th A very nourishing diet, especially of shell-fish.

5th The internal administration of Pil Phosphori cum Ferro Comp as prepared by WM R WARNER & CO.

SPECIAL NOTE: Pil Phosphori cum Ferro Comp are sold in bottles containing 100 pills, the coating of which is coloured a delicate pink, to establish their identity. Physicians when prescribing would do well to, order in bottles of 100 and specify Warner & Co.

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MICHIGAN COLLEGE OF MEDICINE, DETROIT

The next Regular Session will open on Tuesday, September 4, 1883 and close early in March

FEES—Matriculation, paid but once \$5 00 Annual including tickets for Regular and Preliminary Terms, \$50 00 Optional or Preliminary Term, to students who do not attend the Regular Session, \$15 00 Graduation, \$20 00 For further particulars and for College Circular apply to

J B BOOK, M D, Registrar

CHICAGO MEDICAL COLLEGE.

Medical Department of the Northwestern University Sessions of 1883 84

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ORIGINAL ARTICLES

THE CAUSES OF THE VARIATIONS OF THE CARDIO-AORTIC OR "PRESPHYGMIC" INTERVAL.

BY A. T. KEIT, M.D., CINCINNATI, O.

CHAPTER III

One of the outcomes of the simultaneous graphic method has been the demonstration and measurement of an interval of time between the beginning of ventricular contraction or systole and opening of the aortic valves, or beginning of the aortic pulse. The term "presphygmic," applied to this interval by the author, appears well chosen, as expressing the phase of ventricular systole which precedes the rise of the arterial pulse. This term and "cardio aortic" or "ventriculo-aortic," will be used synonymously in this article.

and near point of a tube representing the aorta. Accordingly, for our purpose, the upper receiver was placed in communication with the interior of the pump of the schema, and the lower receiver with the interior of the egress tube, twelve inches distant. Thus, compression of the pump or ventricle immediately increases the pressure within, which increase sooner or later overcomes the valvular barrier, and is felt in the arterial tube. The two events of ventricular and arterial increase of pressure are instantly signaled as waves, and their time relation to each other is then easily determined. The arterial tube, being practically rigid, would give for the short distance traversed an inappreciable transmission interval, so all the delays signaled by the traces may be placed to the account of the schematic presphygmic interval. The action of the hand on the pump can be made to imitate very closely the movements of the human ventricle

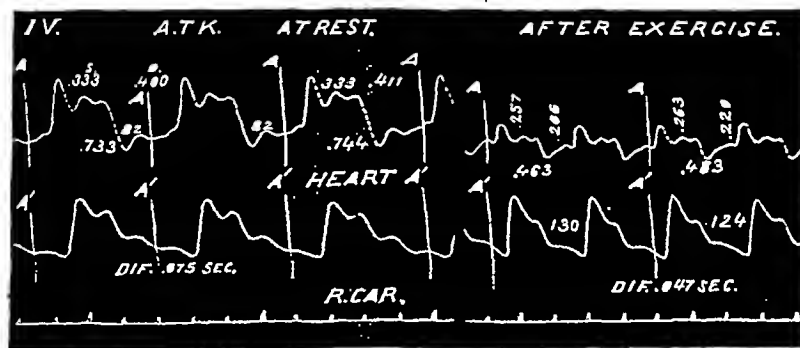


Fig 43

Observations relating to the presphygmic interval must necessarily be made on man between the point of ventricular beat and the point of pulsation of a near artery, as the carotid, or subclavian, the former being usually selected as more accessible for exploration. To get the presphygmic interval in its purity, it is only required to deduct from the full cardio-carotid interval the brief transmission interval of the pulse wave between the points named, but so short is this interval compared with the whole cardio-carotid time difference that practically it may be neglected, and the time between the ventricular beat and carotid pulse taken as the representative of the presphygmic interval.

Experiments on the schema in aid of elucidation of questions pertaining to the presphygmic interval must be made between a pump representing the heart

In the present study the form of distinct propositions will be continued.

PROPOSITION I—The duration of the presphygmic interval varies with the pulse rate, being shorter with frequent and longer with rare pulsations.

Experiment on man never fails to prove variation in the sense stated, of the cardio-carotid interval coincident with a considerable variation of pulse rate. We offer two illustrations. Fig 43 is reproduced from a former publication.¹ The heart and carotid were traced before, and immediately after, active exertion. The pulse rate before was 82, after 130. The cardio carotid interval was before 075", after 047", all as shown.

Fig 44 was taken from a girl, aged twelve years,

¹Boston Med and Surg Journal Sept 29 1881 p 733

on the second day of scarlet fever Temperature 103.2°, pulse-rate 126 The tracings are of the heart and radial, and carotid and radial The cardio-radial interval measures $\frac{1}{10}$ " and the carotid-radial $\frac{1}{15}$ ", which would make the cardio-carotid interval only $\frac{1}{30}$ " We could easily multiply such examples

Coincidence of cardio-carotid lengthening and pulse infrequency has its limits We have found that an interval of $\frac{1}{10}$ " usually goes with a pulse of 60, but

same, whatever the order of succession of the impulses

But in the organism, when the pulse rate changes other conditions change likewise, and in these concomitants we shall find the real producers of the presphygmie variations found associated with modifications of pulse-rate

PROPOSITION II — The duration of the presphygmie interval varies with the mode of ventricular systole,

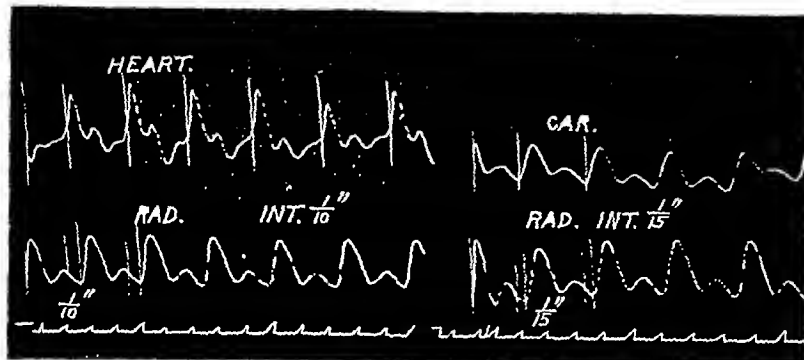


Fig 44

if the latter fall lower, there is no certainty that the former will farther lengthen

This relationship between the pulse-rate and cardio-carotid interval for variations between 60 and 120, the author expresses by the following working formula The cardio-carotid interval is normally about one-tenth the duration of the pertaining pulsation Thus a pulse of 60, 1 second long, would give for the interval $\frac{1}{10}$ second, a pulse of 72, $\frac{2}{3}$ second long, would give $\frac{1}{5}$ second, and so on Any considerable departure from this ratio, we consider, would be irregular, and dependent upon abnormal condi-

being longer with slow and shorter with quick contractions

It would appear that effect must follow cause as implied in the proposition, for a quick action of the ventricle must raise the ventricular pressure, so as to overcome the arterial pressure and send forth the wave sooner than a slow action But the demonstration is easily made on the schema

In Fig 45 the ventricle was first made to contract slowly, and then quickly, with a ventricular pressure of 4 inches, and arterial gradually rising from 50 inches It is seen that the interval between the ven-

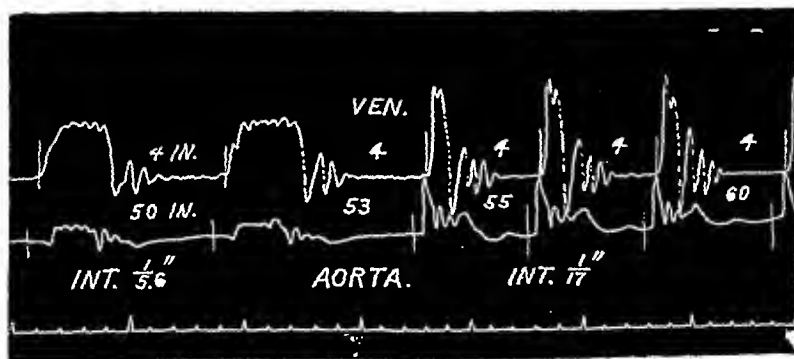


Fig 45

tions New observations confirm in the main the justness of this formula

Nevertheless pulse-rate in itself can have no modifying influence upon the presphygmie interval, other things being equal, the rate may be fast or slow and the interval remain the same With the schema, the ventricle worked at a uniform quickness and force, and the outflow and pressure maintained at a given rate and value, the interval between the rises of pressure in the ventricle and artery will be the

tricular and arterial waves is very much longer under the slow impulsion than that under the quick, the former measuring $\frac{1}{56}$ ", and the latter $\frac{1}{17}$ "

It is plain that the greater the difference between the pressure in the ventricle and artery, the greater will be the modifying effect of different modes of ventricular action, and if the pressures are in equilibrium, a slow action will start the arterial wave as soon as a quick action

When we seek in man examples of the effect of different modes of ventricular action, we find them in modifications of pulse frequency The frequent

pulse is sent forth by a comparatively quick systole, and the rare pulse by a comparatively slow systole. Figures 43 and 44, lately produced, well illustrate this proposition. It cannot be doubted that a quick ventricular systole characterized the acceleration of movement shown

latter above the former. One condition alone could defeat such an order, viz. a quicker initial ventricular contraction coincident with the higher arterial pressure, but the proofs are convincing that the reverse obtains.

In demonstration, we offer an example from exper-

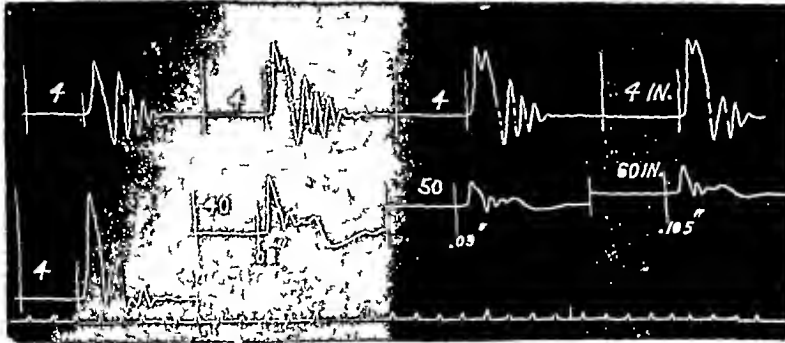


Fig 46

It may be true that the arterial pulse is sometimes quick and rare, or slow and frequent, but ventricular systole is probably always slow when rare, or quick when frequent. We can understand such coincidence of slow systole and quick pulse, or quick

ments on the schema

Fig 46 shows traces of the ventricular and arterial waves at different degrees of arterial pressure, the ventricular remaining throughout at a uniform pressure of 4 inches. The first waves, with pressures in



Fig 47

systole and slow pulse, inasmuch as the quality of the arterial pulse depends upon the arterial as well as the cardiac conditions.

PROPOSITION III.—The duration of the presphygmic interval varies with the excess of arterial over ventricular blood pressure, and is longer with a high,

equilibrium, show no appreciable arterial delay, the second waves, with arterial pressure at 40 inches, show a delay of .08 second, the third waves, with arterial pressure at 50 inches, show a delay of .09 second, and the fourth waves, with arterial pressure at 60 inches, show a delay of .105 second.

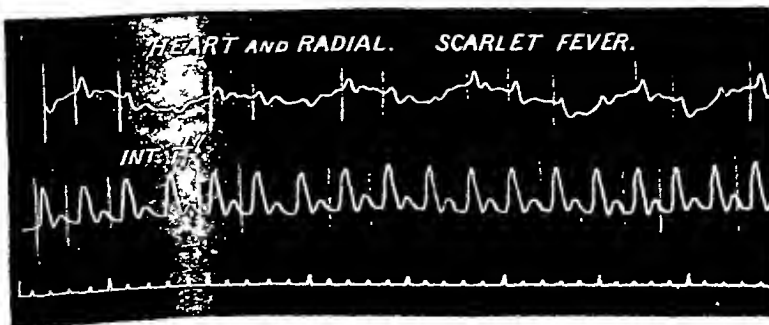


Fig 48

and shorter with a low value of such difference.

Assent to this proposition is readily gained through *a priori* processes. At the beginning of systole, the higher the arterial pressure relatively to the ventricular, the longer must be the time required to raise it

In man the experiment of tracing the heart and carotid before and during compression of the femorals, succeeds in showing elongation of the presphygmic interval as the increased aortic pressure is an

from the nine year old

boy that furnished Fig 27. The cardio-carotid interval is $\frac{1}{12}$ second before and $\frac{1}{10}$ second during the compression. This experiment commends itself for its purity in that there are no complicating conditions.

Again, in fever the arterial pressure is notably low, and always in this condition, if the heart valves are intact, the cardio carotid interval is shown to be diminished. In illustration, besides Fig 44, before given, Fig 48 may also be studied. It was taken from a boy five years old in the height of scarlet fever, of which he died two days afterward. The

rate stands in a sense as the exponent of the mode of systole and relative arterial pressure. When the pulse is frequent, systole is quick and the pressure is low, and the interval is short. On the other hand, when the pulse is rare, systole is slow and the pressure is high, and the interval is long.

It is worthy of remark that the ventricular and arterial blood-pressures, while readily changing their relative value, tend promptly to return to the normal difference, and in the processes of these fluctuations the operations of the modifying factors may again be farther modified. Thus, if the capillaries

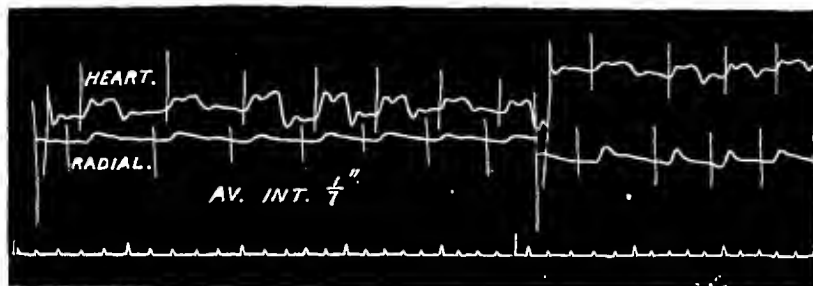


Fig 49

traces are of the heart and radial, but from these it is easy to approximate the interval between the heart and carotid.

The cardio radial interval averages about $\frac{1}{4}$ second, which, even with a rapid transmission time would make the cardio-carotid interval extremely short, in no event could it exceed $\frac{1}{30}$ second. To make the showing stronger we introduce figure 49, taken from a healthy little boy of the same age, on the same day, with the instrument unchanged. It will be observed that the cardio radial interval here

become constricted, the increased arterial pressure will add itself to the slow ventricular contraction, and the two will produce a marked lengthening of the presphygmic interval, but soon the ventricular pressure rises and the arterial declines, the balance is restored, and the mode of systole and the presphygmic interval again become normal.

Or, again, if the capillaries become suddenly relaxed, the arterial pressure falls, the heart starts off with quickened and accelerated action, and the two factors here unite to produce a marked shortening

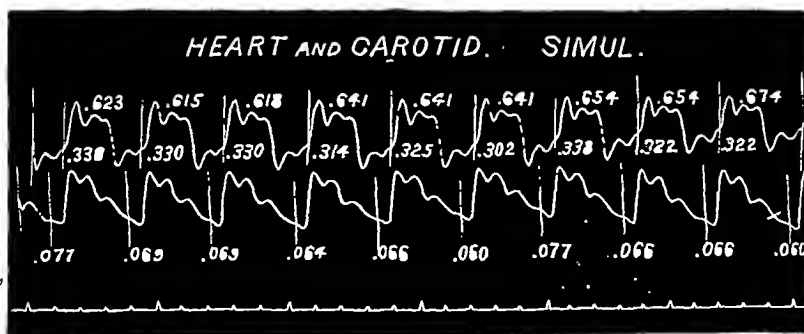


FIG 50

averages about $\frac{1}{7}$ second, twice as long as in the former instance.

However, examples from fever cases are complicated with the effect of quickened systolic contraction, and indeed, it is difficult from any source to obtain the effect of lowered arterial pressure dissociated from that of systolic quickening. Nevertheless, it must be true that quickness of ventricular contraction could not produce such shortening of the presphygmic interval without concurrence of the effect of low arterial pressure.

We are now prepared to understand why the duration of the presphygmic interval is proportional inversely to the pulse rate. It is because the pulse-

of the presphygmic interval, but under the increased frequency of the systoles the pressure soon rises again, and whilst rising, the pulse acceleration not yet checked, the factors antagonize each other, and the presphygmic interval may not be diminished, though the pulse is frequent. Soon, however, all is regular again. These variations of conditions and effects can be well illustrated on the schema.

PROPOSITION IV.—The duration of the presphygmic interval is subject to limited variation, even when the cardiac action and blood-pressure appear most regular and equal.

In illustration of this proposition, we will study Fig 50, selected for the distinct markings and appa-

rent regularity of the pulsations. We took the pains to measure on the slide the cardio-carotid interval of each pulsation, marking the result below each basal point of the carotid traces, also the duration of each cardiac systole and cycle, marking them respectively as shown in the cut. These measurements were made under a glass, with extreme care, and it is believed they contain no material error.

The lower row of decimals shows the variations of the cardio-carotid interval. The longest interval is .077" and the shortest .060".

The upper row of decimals shows the duration of

to the duration of the cardiac cycles, but as a rule varies in the same sense as the duration of the cardiac systoles.

In explanation of the proposition, we remark there are no facts anywhere to indicate that diastole is anything but a cipher in the processes, all depends upon systole. The explanation is found in the fact before developed and applied—viz that when the systoles are longer their beginning is slower, which determines a longer interval, and when the systoles are shorter their beginning is quicker, which determines a shorter interval.

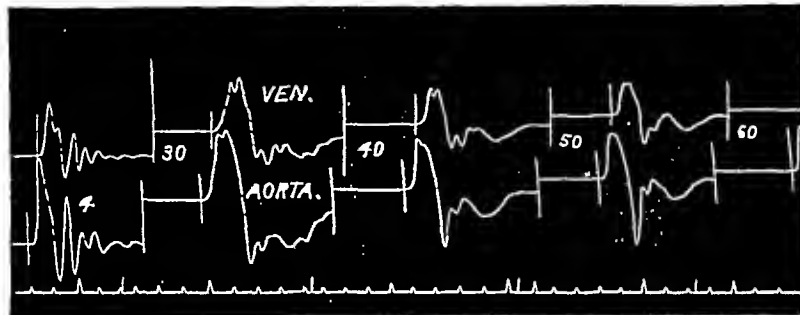


Fig 51

the cardiac cycles. Examining the relation between these and the corresponding cardio-carotid intervals, the variations are found discrepant, a long interval going, as likely, with a short cycle, and a short interval with a long cycle. So in the small variations of cardiac rhythm, the rule does not hold of a ratio between the presphygmic interval and the pulse-rate.

¶The middle row of decimals shows the duration of the cardiac systoles. Examining the relation between these and the cardio-carotid intervals, the va-

Passing now to the consideration of cardiac valvular and orificial troubles, we commence with—

PROPOSITION VI—The presphygmic interval is abnormally shortened in free aortic insufficiency.

François-Franck first demonstrated on man that the delay of the arterial pulse on the heart is diminished in aortic insufficiency. The author had independently foreseen the fact, and given its true rationale,¹ and soon was able to verify its reality by actual observation. The fact needs no further substantiation, and such precipitation of the arterial pulse, notably of the

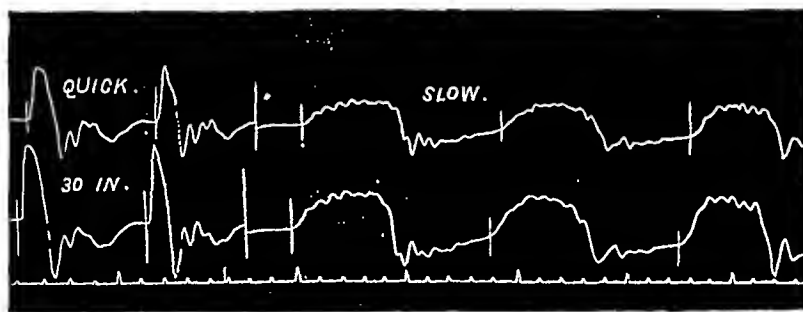


FIG 52

riations are found in the same direction, a long interval going with a long systole, and a short interval with a short systole. The correspondence here shown we have found to hold as a rule in the small variations of systolic duration of so-called regular pulsations. But the rule has exceptions, for the length of systole is determined by its ending as well as by its mode of beginning.

Therefore we feel justified in formulating these observations under the following statement.

PROPOSITION V—In the small variations of apparently regular pulsations the presphygmic interval does not observe any rule of variation with respect

to the cardio-carotid, of course, implies abbreviation or extinction of the presphygmic interval. However, the phenomenon in question is so happily illustrated on the schema that we will not forbear the presentation of two examples of results so obtained.

Fig 51 shows traces of waves from the ventricle and aortic tube taken with the egress or aortic valve removed, representing free aortic insufficiency. The waves were traced at successively increasing pressures, viz 30, 40, 50 and 60 inches.

It is shown that the vent... difference... and the high-

est pressure giving precisely the same result. It is also shown that the ventricular pressure rises *passu* with the arterial.

Fig 52 represents aortic insufficiency under quick and slow action of the ventricle. It will be noticed that the waves are as nearly synchronous under the one as under the other.

These showings are all distinctly different from what has been shown to take place when the valves are intact, and in the light of their testimony we are all the more ready to accept the following explanation of the interesting and valuable diagnostic fact,

the individuals. In illustration of this important fact we will here add one other example.

Fig 53 was taken from the patient referred to in Chapter II, and from whom was taken Fig 32, showing the carotid-radial traces. It will be remembered he was suffering from typhoid fever complicated with mitral regurgitation. The traces of the first of the figure were taken on the 19th day of the fever, with temperature 103.2° , and pulse-rate 114. The cardio-carotid interval measures between $\frac{1}{6}$ and $\frac{1}{5}$ second, when, under the conditions, without mitral insufficiency, it could not have measured half as much.

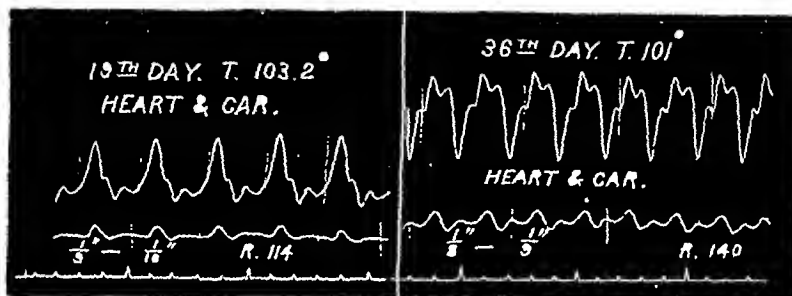


Fig 53

that the arterial pulse appears distinctly earlier than normal in free aortic insufficiency.

When the aortic valves are permanently open, the blood-pressure at the end of diastole is equal in the ventricle and aorta, they constituting parts of one cavity, and therefore, immediately upon the contraction of the ventricle, the blood-pressure in the aorta begins to rise. Whereas when the aortic valves are intact, the blood-pressure at the end of diastole is much lower in the ventricle than in the aorta, and therefore time is required after the beginning of ven-

The last part of the figure was given on the 36th day, temperature 101° , pulse 140. The cardio-carotid interval here measures between $\frac{1}{5}$ and $\frac{1}{4}$ second, when, irrespective of the valvular lesion, it could not, in any event, have exceeded $\frac{1}{4}$ second. Contrast these intervals with those of the fewer cases Figs 44 and 48, in which there was no cardiac valvular trouble, and in which the cardio carotid intervals were not over $\frac{1}{30}$ second.

The schema also is lucid here. If the ingress or mitral valve be removed and a second pouch added

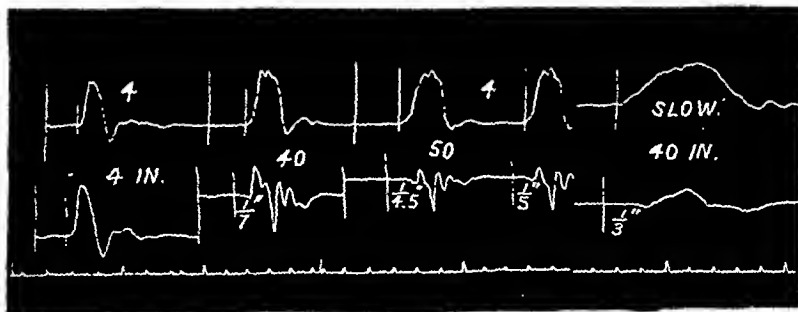


Fig 54

tricular systole to raise the ventricular pressure above the aortic, which must take place before the arterial pulse can be initiated. In the one case the pre-sphygmic interval is intangible, in the other it can easily be measured.

In contrast with the preceding is

PROPOSITION VII—The presphygmic interval is abnormally lengthened in mitral insufficiency.

We were the first to demonstrate abnormal delay of the arterial pulse in mitral insufficiency. Our published cases¹ show the cardio-carotid interval to be at least double what would otherwise be normal to

to the ventricle, in imitation of the auricle, and then these worked in imitation of the action of the heart, and traces taken, we get a prolonged ventriculo-aortic time-difference. Fig 54 gives results obtained under the conditions named.

These intervals are very long, compared with those of Fig 46, in which the valves were intact.

From the form of the ventricular traces it might be supposed that the action was slow, and the longer intervals resulted therefrom, but in fact the contractions were quick, and the sloping ascents were in consequence of the free backward escape of the liquid. The traces in the latter part of the figure show the increased lengthening effect of slow ventricular contraction.

¹ *Lancet and Clinic* (Cincinnati) March 27, 1879

Then, with the proofs in its favor, we risk nothing in accepting abnormal delay of the arterial pulse, in other words, elongation of the presphygmic interval, as a certain effect of free mitral insufficiency. And proved *post mortem*. The mechanism and result can be aptly shown on the schema.

Fig 55 was procured with the egress valve pressed upon by a spring weight, which permitted it to yield

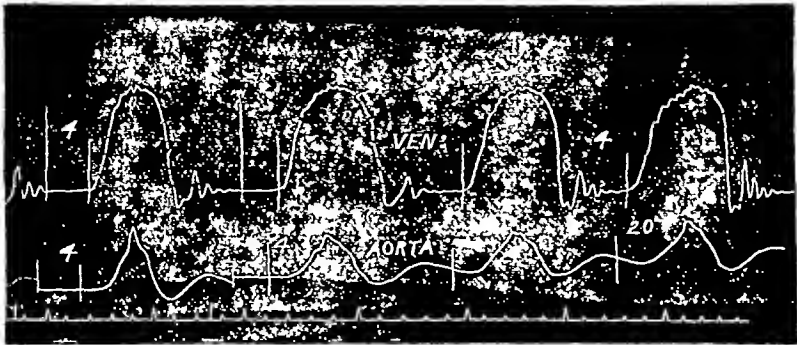


Fig 55

the mechanism of the phenomenon we would explain thus. When ventricular systole begins, there being no mitral barrier, the blood first flows into the relaxed auricle, and is not turned into the aorta until a only to a superior pressure. It will be observed that the ventriculo-aortic intervals are very long, and even with the liquid pressures in equilibrium at 4 inches. In the figure, the effect of stenosis is added to that

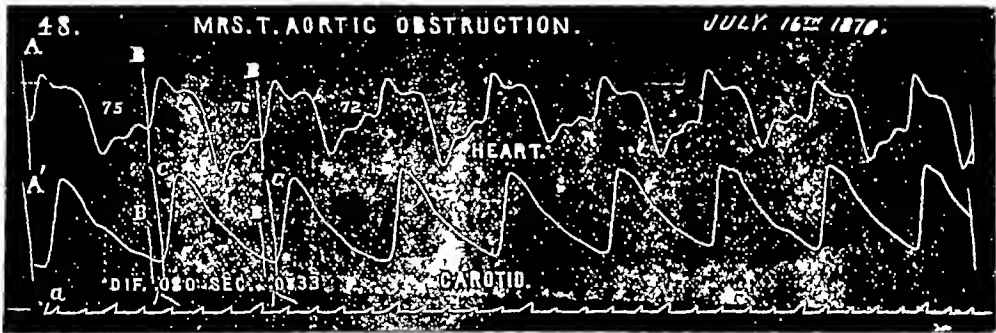


Fig 56 Effect of Aortic Stenosis

sufficient head of pressure shall have gathered to force the aortic valves. Time is thus lost between the beginning of ventricular contraction and that of aortic expansion, and the presphygmic interval is accordingly lengthened.

of the heavy valve, as shown in the sloping ascent and rounded and distant summit of the arterial trace. But it is possible to obtain on the schema what some times happens in the living, viz. retardation of the beginning without retardation of the summit, by hav-

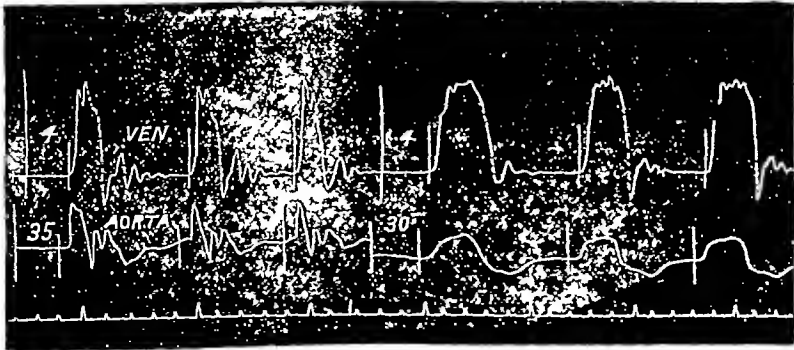


Fig 57 Effect of Aortic Stenosis shown on the Schema

PROPOSITION VIII.—The presphygmic interval is lengthened in that variety of aortic obstruction in which the elevation or opening of the valves proves to be difficult independent of the stenosis. Examples have been given of the delay of the carotid pulse by the valve close with a species of locking so that its opening is delayed, but when once forced it rises thus heavy as if without stenosis. The delay of the trace of the valves with stenosis is not the same as the delay of the carotid pulse by the valve close with a species of locking so that its opening is delayed, but when once forced it rises thus heavy as if without stenosis. The delay of the trace of the valves with stenosis is not the same as the delay of the carotid pulse by the valve close with a species of locking so that its opening is delayed, but when once forced it rises thus heavy as if without stenosis.

summit Manifestly the presphygmie interval is only concerned in delay of the beginning of the arterial wave

PROPOSITION IX—Aortic obstruction from pure aortic stenosis does not cause elongation of the presphygmie interval, but only delay of the arterial summit

It is plain that, with pliable aortic valves, the blood would begin to flow as soon through a small as through a large orifice

The form of the pulse in aortic stenosis is familiar to all, but Fig 56, here republished, shows not

unfilled, and systole starting under these conditions, it would progress longer than usual before the parietes would press sufficiently upon the contents to force them through the aortic valves With the mitral orifice and valve normal, systole begins upon a distended ventricle, the pressure rises rapidly from the start, and the overflow into the aorta promptly begins

Therefore we conceive that the problem *will* be demonstrated in favor of the ability of mitral constriction to produce exaggerated delay of the pulse, which implies elongation of the presphygmie interval

The following are prominent among the facts de-

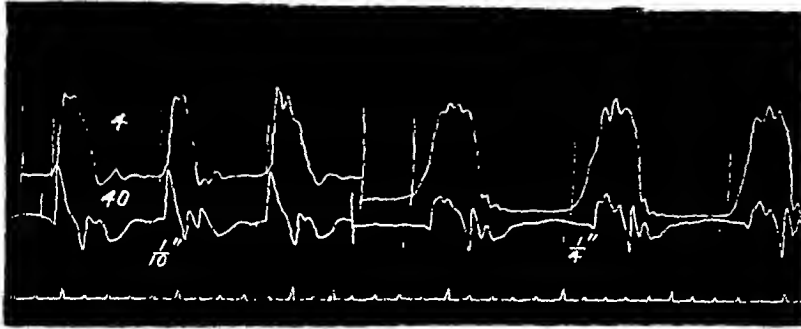


Fig 58—Effect of mitral constriction shown on the schema

only the peculiar form, but that the beginning of the pulse was not delayed

Schema In Fig 57 the traces of the first part were taken at thirty-five inches pressure, with the valve intact and tube free, and the traces of the last part at thirty inches pressure, with valve intact and tube constricted by compression just in front of the valve It is seen that while the form of the arterial trace after the compression is strictly that of aortic stenosis, the beginning of the waves are not in the least later than before the compression

Therefore the presphygmie interval is not lengthened in aortic stenosis if the aortic valves are pliable

PROPOSITION X—The effect of mitral constriction on the duration of the presphygmie interval remains as a problem to be solved

No examples have been furnished from any observer of measurement of the cardio-arterial interval in cases of mitral stenosis Experimental data in relation to this point are derived alone from the schema, and these, though positive, we hesitate to accept until confirmed by observations on man However, the fact is patent that in no instance has the schema failed, when applied, of reproducing the same effects as observed in man

Fig 58 shows the result obtained, the first part under normal conditions, the last part with ingress tube constricted immediately behind the valve The ventricular trace indicates that under the constriction the pressure within must have fallen in diastole to a point relatively low But the striking showing is the great decay of the arterial trace, showing about $\frac{1}{4}$ second, whereas the normal shows about $\frac{1}{10}$ second

This result was a surprise to us, and yet, on maturer reflection, it does not appear inconsistent with the mechanisms involved in mitral constriction At the end of diastole, the ventricle being quite relaxed and

terminated by this last research

1 The duration of the presphygmie interval is *increased* in slow ventricular contraction, infrequent pulsations, relatively high arterial pressure, heavy aortic valves, mitral insufficiency, and probably mitral constriction

2 The duration of the presphygmie interval is *diminished* in quick ventricular contraction, frequent pulsations, relatively low arterial pressure, and aortic insufficiency

THE INCREASE OF INSANITY IN THE UNITED STATES—ITS CAUSES AND SOURCES.

BY FOSTER PRATT, M D, KALAMAZOO, MICH

(Read to the American Public Health Association, Nov 15, 1883)

The increase of population necessarily increases the aggregate of insane The important question, and the one mainly to be discussed, is this Does insanity increase faster, *in proportion*, than does the population?

The facts, on which the following discussion is based, are taken mainly from the census of 1880, in connection with that of 1850, 1860 and 1870 The reports of the number of insane in the preceding decades are known to be defective in their aggregates, but whatever error there is in the total, the error is fairly and proportionately distributed between the several classes of population, and to this extent they may be used as standards of comparison

The census of 1880, manifestly the fullest and most accurate ever made by our Government, is itself defective, while it makes manifest the increased ratio of insane to population, it does not (because of certain omissions) enable us to state what the precise ratio is

The political issues of slavery, for thirty years, have concentrated the attention, even of scientists, to the

one race relation of whites and blacks, but other race relations and their effects will now receive their due share of attention. The entire population of the United States is considered in three classes—native white, foreign white and colored.

Beginning with 1850 (and using round numbers) we find, that during the thirty years intervening between 1820 and 1850, 2,250,000 emigrants came to the United States, and that, out of a total population, in the latter year, 23,191,000, 2,240,000 of foreign born yet remained alive and in the country. The total number returned insane, by the census of this year, was 15,610, of which 2,049 were of foreign birth. It thus appears that the foreign born—about one-tenth of the population—furnished in 1850 one-seventh of the insane.

During the following decade, 2,814,000 emigrants cast their lot with us, and in 1860, in a total population of 31,443,000, 4,136,000 were foreign born. The total number of insane, then in the United States, was reported to be 23,999, and of this 5,768 were foreign born—nearly one-eighth of the population—furnishing one fourth of the reported insane.

Between 1860 and 1870, 1,878,000 emigrants arrived, and in 1870, out of a total population of 38,538,000, the foreign born numbered 5,567,000. The aggregate of insane for that year was 37,432, of which 11,221 were charged to the foreign born element, the foreign born—one seventh of the population—furnishing nearly one-third of the insane. This decade included the four years of war.

During the last census decade, from 1870 to 1880, our foreign accessions were 2,742,000, and in a total population of 50,155,000 in 1880, the foreign born were 6,679,000. The aggregate number of insane in 1880 (greatly increased, as we have seen, by greater care and accuracy in the census work) was 91,997, and of this number 26,346 were foreign born, a little less than one-seventh of the population furnishing more than one-fourth and nearly one third of the insane—13½ per cent of the population producing 28 75-100 per cent of the insane.

Admitting that census tables, prior to 1880, fail to give the full *aggregates* of the insane, it will be safe, for present purposes, to assume, that, whatever errors there may have been in the totals, the error of each census, was fairly distributed between the various elements of population, so that the census *proportion* of insane, to each class of population, was fair and just. If this be conceded—and a close study of the census tables and other sources of information, shows that it should be—we are enabled to reach several interesting and significant results.

1 Beginning with 1860—while the foreign born population had increased, since 1850, nearly 100 per cent, the foreign born insane had increased 181 per cent.

2 That at the close of the next decade in 1870, the total foreign born had increased only about thirty per cent, but the insane of this class had increased nearly 100 per cent.

3 In 1880, the foreign born had increased less than twenty per cent, but their insane had increased 150 per cent.

A statement of the proportion of insane to each class of population—native and foreign—at each census, shows, very clearly, the relative rate of increase.

In 1850, of native population, there was 1 insane in 1,545, and of the foreign born, 1 in 1,095.

In 1860, of native born, the proportion was 1 in 1,559, and of foreign born, 1 in 717.

In 1870, natives furnished 1 in 1,258, and foreign, 1 in 497.

In 1880, native population shows 1 insane to 662, and foreign born, 1 in 250.

(It should be borne in mind that, in the foregoing statements, the inaccuracy of the census aggregates, in all vital statistics, prior to 1880, is conceded, but their relative fairness, in the distribution of insane, is assumed.)

Thus it becomes manifest, that while the proportion of native insane to native population remained nearly the same, in 1850, 1860, and 1870, the proportion of foreign insane, in the foreign element, rapidly increased from 1 in 1,095 in 1850 to 1 in 497 in 1870, and when we reach the approximately accurate aggregates of 1880, we find the native insane amount to 1 in 662 of native population, while the foreign born insane are 1 in 250 of foreign born population—and that nearly one eighth of the aggregate population furnishes nearly one-third of the aggregate insane.

But in fairness to the foreign white element, the two prominent factors of our native population—white and colored—should be separately considered. If this be done, on the basis of the last census, we find, that the native colored races (Negroes and Indians), furnish 1 insane in 1,096 7-10, the native white, 1 in 618 12-100, and the foreign born white, 1 in 250, the first being about 1 in 1,000, the second 1 6-10 in 1,000, and the last 4 in 1,000. These differences are very marked. The black race, notably afflicted (especially in the Southern States), with idiocy, is freest of all from insanity. The foreign element bring with them few idiots, but they generate an astonishingly large proportion of insane. Our native white population show more of both, than (until lately) was believed by some to exist, but the causes of the increase will be subsequently discussed.

Your attention is now invited to the following table.

This table has been constructed of figures furnished by the "census compendium" of 1880, recently distributed.

The figures of its first three columns are derived from table 1 of the compend, thus:

"Native *White* Population" is obtained by subtracting "Colored" and "Indian" from "Native," of the census table, "Foreign *White*," by subtracting "Chinese" and "Japanese" from "Foreign," of the census table, and "Colored Races," by adding "Colored," "Indians," "Chinese," and "Japanese" of census table.

This method of obtaining "Native White" was found to be better for the present purpose than to copy the "Native White" figures census table No 28, because of certain unexplained discrepancies between census tables Nos 1 and 28. Census table No

is consistent with itself, and balances properly in all its parts, and by following it in the construction of these "Population" columns the table becomes harmonious with itself and with the census table also.

The blacks, by their great preponderance, are the essential element of the "Colored Races" in the table, for, while the blacks alone number 6,580,793, Chinese, Japanese and Indians together number only 172,220. By the consolidation of these elements the table is simplified, and no injustice is done to any class in the study of their relations to insanity and idiocy.

The three columns of "insane" are constructed from census table 138, subtracting the "colored" and "Indian" elements from the "native" insane, gives "native white" insane, subtracting the "Chinese" and "Japanese" elements from "foreign" insane, gives "foreign white" insane, and "colored" insane of the census table (including, as it does, the insane of all the colored race, whether native or foreign), has been transferred, without change, to this table. As before remarked, this simplifies the table, facilitates comparison, and does no injustice.

The three columns of "idiotic" have been similarly constructed from census table 139, and are given to complete the tabular statement of the mental conditions of our population as shown by the census.

The reason for constructing this table, so as to show the relations of "Northern States," "Southern States" and "Territories" to insanity and idiocy, will be obvious upon study, and need not be stated.

This rearrangement of census figures presents (which the census tables do not) the three predominant classes of our population by geographical sections, in a shape for convenient examination and comparison.

TABLE I

Constructed from tables I, CXXXVIII and CXXXIX of the Census Compendium of 1880, to show, by geographical sections, the actual and relative contributions, made by "Native Whites," "Foreign Whites," and "Colored Races" (native and foreign) to the "Insane" and "Idiotic" classes found, by said census, in each State and Territory of the United States. (See tables.)

From this table we find by calculation

1 That the proportion of insane to native white population, in the Northern States, is 1 in 597, in the Southern States, 1 in 660, and in the District of Columbia and Territories, 1 in 748.

2 That among the foreign white, the proportion, in the Northern States, is 1 in 248, in the Southern States, 1 in 283, and in the District and Territories, 1 in 236.

3 That among the colored race, the proportion, in the Northern States, is 1 in 545, in the District and Territories, 1 in 680, and in the Southern States, 1 in 1,235.

4 That the average proportion of insanity among native whites, in the entire United States, is 1 in 618 among foreign whites, 1 in 250, and among

the colored races, 1 in 1,097, and that the total average, for the entire country, of all population, is 1 in 545 ¹⁰⁰/₁₀₀.

5 The high rate and the slight variations of the proportions of foreign insane to foreign population, in all sections, should be noted.

6 The large proportion of insanity among the colored races, in the Northern States and Territories, as compared with that in the Southern States, is also noteworthy.

7 The different proportions of native white insane to native white population, North and South, and the causes of it, demand careful study and will be briefly discussed in this paper.

8 It is a significant fact that the Northern States, including the District and Territories, containing about sixty per cent of the entire population, have about seventy per cent of its insane, and that this ten per cent of proportional excess is more than supplied by the excess of foreign insane over the number that would result if the ratio of native insane to

SECTION I.—NORTHERN STATES

Total	Population			Insane			Idiotic		
	Native white	Foreign white	Colored races	Native white	Foreign white	Colored races	Native white	Foreign white	Colored races
California	549,526	217,636	97,113	532	1,331	132	427	56	14
Colorado	129,948	39,720	12,201	38	33	8	71	4	15
Connecticut	480,906	129,865	11,931	118	209	37	722	20	15
Illinois	2,447,757	551,314	46,770	2,115	2,115	66	3,717	406	44
Indiana	1,794,649	144,149	39,523	2,844	616	76	4,466	175	8
Iowa	1,152,931	201,617	10,015	1,707	85	14	2,062	218	10
Kansas	842,085	1,060,7	43,911	70	4	30	974	100	10
Maine	287,977	58,872	2,084	130	178	7	1,771	22	14
Massachusetts	1,320,525	443,4	16,393	3,301	1,784	42	1,847	172	14
Michigan	1,220,080	358,480	22,77	1,807	931	38	1,366	318	27
Minnesota	509,213	97,796	3,859	353	737	2	1,011	101	1
Nebraska	332,365	97,796	2,635	216	700	4	26	16	4
New Hampshire	297,949	46,280	8,710	14	10	1	14	3	1
New Jersey	870,499	221,528	30,907	927	660	82	932	79	4
New York	5,805,282	1,210,453	80,849	7,395	6,311	193	3,194	69	61
Ohio	2,723,089	324,831	80,142	5,121	1,073	102	6,000	307	123
Oregon	142,084	20,991	11,603	247	114	17	168	9	104
Pennsylvania	3,609,343	567,073	85,675	5,332	2,140	171	6,089	304	104
Rhode Island	199,743	73,006	6,592	441	229	14	199	24	10
Vermont	290,299	40,939	1,063	829	181	5	744	36	0
Wisconsin	904,209	105,409	5,879	1,041	1,476	9	1,365	411	0
Total	24,490,335	5,703,574	609,734	40,994	23,226	1,119	39,893	3,257	629

SECTION II—SOUTHERN STATES

Southern States	Population			Insane			Idiotic		
	Native white	Foreign white	Colored races	Native white	Foreign white	Colored races	Native white	Foreign white	Colored races
Alabama	652,455	9,730	600,320	1,064	46	411	1,348	6	869
Arkansas	581,314	10,417	570,897	1,016	13	100	1,044	6	344
Delaware	110,693	9,467	120,160	121	29	8	210	6	53
Florida	132,714	9,891	122,823	153	85	208	5	156	5
Georgia	866,359	10,547	855,812	1,251	35	411	1,492	7	934
Kentucky	59,507	271,511	321,018	1,337	392	345	3,008	18	466
Louisiana	401,297	484,992	886,289	1,530	168	304	569	18	466
Maryland	641,892	210,250	852,142	1,353	245	259	927	32	360
Mississippi	470,240	9,158	479,398	675	40	432	799	2	778
North Carolina	1,811,339	211,487	2,022,826	2,298	867	1,535	3,005	125	2,402
South Carolina	863,501	145,554	1,009,055	1,586	5	437	3,005	125	2,402
Tennessee	1,122,154	7,677	1,129,831	1,672	66	364	799	7	1,008
Texas	1,082,757	16,677	1,099,434	1,972	38	461	2,802	15	716
Virginia	1,460,180	11,480	1,471,660	1,952	206	306	2,802	96	640
West Virginia	574,535	18,260	592,795	1,619	100	692	1,832	12	995
Total	11,818,818	64,987	11,883,805	17,892	2,704	897	23,931	364	8,811

native population, in the North, were made the ratio of foreign population. To illustrate. The average ratio of insane to all native population (white and colored) in the Northern States, is 1 to 642. If this proportion be applied to the 5,763,874 foreign born living in the North, the number of insane resulting among them would be 9,240 instead of 23,989, as it now is—a difference of 14,749, which is much more than ten per cent of proportional excess of insane to population in the Northern States and Territories.

9 The comparison of the productive ratio of insane in the foreign population (which is the most productive) with that of the colored population in the Southern States (which is the least productive) is very striking. The foreign element in the Northern States and the colored element in the Southern States are nearly equal in numbers, but the former exceeds the latter in the production of insanity by the proportion of nearly five to one!

10 The total insanity found by the census, 1880, is 91,997.

If the colored average for the United States were applied to the entire population, the total number insane would be 45,721—about half what it is, if the native white average were similarly used, the number insane would be 81,158—more than 10,000 less than it is, but if the foreign white average in the United States were the rule for the entire population, the number of insane would be 200,623—or, 118 per cent more than it is. The application of these various ratios to the entire population, demonstrates the vast significance of seemingly slight differences in the ratios.

SECTION III—THE DISTRICT OF COLUMBIA AND TERRITORIES

DISTRICT OF COLUMBIA AND TERRITORIES	POPULATION			INSANE			IDIOTIC		
	Native white	Foreign white	Colored races	Native white	Foreign white	Colored races	Native white	Foreign white	Colored races
Arizona	81,743	14,417	5,280	9	10	2	4	4	3
District of Columbia	11,850	51,557	2,030	30	48	124	44	10	53
Idaho	100,901	17,105	59,618	308	36	12	18	5	1
Montana	22,418	0,595	3,597	8	8	3	12	1	2
New Mexico	9,756	9,756	3,597	26	34	8	108	5	9
Utah	98,930	43,493	10,841	132	12	2	105	43	3
Wyoming	54,583	12,616	7,917	64	67	2	43	2	3
Total	520,022	128,469	95,952	695	713	141	385	93	77
RECAPITULATION BY SECTIONS	POPULATION			INSANE			IDIOTIC		
	Native white	Foreign white	Colored races	Native white	Foreign white	Colored races	Native white	Foreign white	Colored races
Northern States	24,490,358	5,763,874	6,097,784	40,994	23,276	1,119	39,895	3,524	689
Southern States	11,850,318	644,987	6,047,019	17,892	2,704	4,897	23,931	364	8,811
Territories and District of Columbia	520,022	128,469	95,952	695	713	141	385	93	77
Total	36,860,698	6,537,330	12,239,755	59,581	26,693	6,157	63,311	4,007	9,577
RECAPITULATION BY CLASSES	POPULATION			INSANE			IDIOTIC		
	Native white	Foreign white	Colored races	Native white	Foreign white	Colored races	Native white	Foreign white	Colored races
Native white	36,828,698	6,537,330	6,757,755	59,581	26,693	6,157	63,311	4,007	9,577
Foreign white	6,537,330	6,537,330	6,757,755	26,693	6,157	6,157	4,007	9,577	9,577
Colored races	6,757,755	6,757,755	6,757,755	6,157	6,157	6,157	9,577	9,577	9,577
Total in United States	90,155,793	90,155,793	90,155,793	91,997	91,997	91,997	96,895	96,895	96,895

A careful study of the table will develop other interesting and important illustrations of the relations of this question to races and sections.

It is thus made apparent that the aggregation of insane has increased with the increasing aggregate of population, and that the proportion of insane to population has steadily increased by accumulation or otherwise since 1850. But there is another and very important question to be considered, are *new* cases of insanity increasing in a ratio greater than that of the population? Are morbid influences insidiously operating on our growing population, which so deprave our vital condition and forces us to produce insanity, year by year, at a rate per cent greater than the rate per cent of our growth? It seems clear, from the preceding study of the census, and the inevitable deductions from its statistics, that this important question must be answered in the affirmative. But the census tables, as before stated, furnish no data that fixes the rate of increase. It tells us how many were *found* insane in 1880, but it does not tell us how many *became* insane that year, and if it did, no previous census furnishes a like statement.

*It is scarcely necessary to call attention to the fact that the totals agree with the footings of Tables No. 1, 135 and 136 of the Census of 1880.

for any previous year, as a basis of comparison. We are compelled, therefore, to ascertain, by other means, whether we are or are not developing an increasing ratio of insane to population. This will be attempted, though the increased ratio, if found to be a fact, cannot be definitely stated. But if we can find satisfactory proof that our annual insane product is unduly increased, we cannot afford to defer action upon it until we are able to make a mathematical statement of the ratio.

Insanity is increasing, manifestly, from three causes. First, the intense life of our native population. This has been so much discussed of late that little need be said of it now. The writer quotes on this point the following from one of his own recent papers: "We see more, hear more, read more, think more, feel more, know more, do more and worry more in ten years than our grandfathers did in thirty. Where does the strain of this intensity fall? Not on our physical strength, for, with all we do, we do not labor as hard, physically, as did our fathers before us. This strain of intensified life falls, of necessity must fall, on the brain and the nervous system." The rapid increase of paresis and other forms of brain and spinal degeneration among our ablest, busiest and best men furnishes fearful proof of the effects of overtaxing the nervous forces. Second, our insane aggregate is increased by immigration. It has been shown by the census of 1850 that the proportion of insane in the foreign-born population at that time was nearly the same as in the native population. Since that year each succeeding census has revealed a rapidly increasing proportion of insane in the foreign class. Soon after 1850 we find the Legislatures of Massachusetts, New York and Maryland passing acts to protect their people from the rapidly increasing burden of foreign paupers, criminals and insane arriving at their respective ports. This simultaneous legislative movement in three States, similarly situated with reference to foreign arrivals, indicates that a new and serious evil demanded a remedy. It also fixes the date of its beginning. To what was the evil due? European municipalities, burdened by defective and criminal classes, seeing, in our hospitality to immigrants, a chance of relieving thousands from a heavy tax, began, in a quiet, unobserved way, to encourage, and aid, and at times almost compel their defective population to come to us. That they did come, and that they have continued to come, each succeeding census, not to speak of other evidences of the fact, furnishes incontrovertible proof. The foreign-born had, of insane, in 1850, one in 1,095, in 1860, one in 717, in 1870, one in 497, and in 1880, one in 250. Such a ratio of insane, much greater than that of the population producing it, could not have resulted from the operation of ordinary or natural agencies.

The tables, compiled and published by the Bureau of Statistics at Washington, show that during the thirty years, between 1850 and 1880, the immigration proper to the United States amounted to the immense aggregate of 8,033,235. The great majority of this element was a valuable acquisition. They brought an aggregate of money, estimated by

competent judges, to be equal to one-half our Federal debt, and their capacity as laborers and producers was an addition to the capital of the country more than equal to the whole debt. Nor is this all, they added largely to the literary, scientific, mechanical, and other skilled activities and industries of our people. But with these come others, and they still come, who are a plague spot on our vital and social conditions, and a blot on our vital statistics.

The "assisted emigrant" began to be numerous twenty-eight years ago, but he was never officially designated till last year. He became especially numerous in 1863 and 1864, when the bounties of "loyal States" filled their quotas with the able-bodied criminals and paupers of Europe. The Union army surgeon, of experience, knows something of this. Officials of European municipalities, having charge of their poor, believe in the law of heredity, they understand its effects, and the poor family, rich in children, but tainted with an insane heredity, and likely or liable to become a public charge, is shrewdly selected by these wise officials to "leave their country for their country's good." The shiftless, the improvident, the lazy the social "crank," the religious "crank," and the political "crank," all come—some voluntarily and many involuntarily—some assisted by the beadle and some by the constable—but they come, to this land of freedom—freedom to live at some other man's expense. But the mere tax, the money aspect of this blight, is of little consequence compared with the fact that so many of them come with inherent qualities that in the next generation dilute and unbalance the brains of our native people, taint their vitality, and vitiate their morals, and, third, insanity is increased among our native whites, by intermarriage with this foreign, tainted element. We have found from the census of 1880 that this foreign-born element—one-eighth of our population—furnishes one-third of our paupers, one-third of our criminals, and one-third of our insane. Can this immigrant element, with its large proportion of insane, intermarry, as they do, by the million, with our native men and women without imparting their large proportion of inherent defects to their children? Do not these children (native born Americans, of course,) increase the proportion of insane to native white population, and still further add to the mischief done by corrupting and increasing the tendencies of the native stock to develop the mental defect? Who can doubt that they do? This body—this American Public Health Association—not to speak of the medical profession—is composed of men who measurably comprehend and who fully believe in the law of heredity, that law by which the qualities, good and bad, of parents, are imposed on their children—I ask you if this intermarriage of millions, more or less tainted by Old World defects, with our sounder native stock, can fail to increase the ratio of native insane to native population? Which of you will answer no?

In 1870, according to Dr. Jarvis, there were 500,000 of this native born, mixed breed, of the first generation, mingled with our population, and 500,000 more of the second and third generations. Table

107, of the census of 1880, shows this mixed element, the mixed progeny of natives and foreigners, to amount to nearly 2,000,000

Attention was called by note 7 (following the table) to the larger ratio of insane among the native whites of the Northern States, than is found in the same class in the Southern States. The census shows that nine-tenths of the foreign born are found in the Northern States, and nearly all this mixing of breeds is there, is it strange, when examined by this light, that the native whites of the North show a much larger proportion of insane than their Southern brethren of the same class, among whom this foreign element is small, and these mixed marriages are relatively few? These figures are full of meaning to the native whites of the North, they show that we are developing a much larger proportion of insane than the native whites of the South, they show, too, the causes of it, and we have a special interest in finding remedy or relief

Finally, can there be a rational doubt—indeed, is it not certain—that the influences and agencies, thus briefly sketched, have already so tainted our native stock, with their hereditary and transmitted traits, that our annual insane product is increasing by a ratio to population notably larger than it was two years ago? Would we be more sure than we now are of the general fact, if census statistics had been so shaped as to enable us to state the precise mathematical value of the fact? If, then, it be a fact, shall we do our duty to the people and the country, if we neglect to give the warning which it is the province of science to give, and which, if we are true men, we will give, that all proper agencies may be invoked to check or to mitigate the mischief?

Mr Wines, special agent in charge of the census statistics of defective classes, seems not to have observed the significance of his own results on this subject. "The tendency to insanity among the foreign population," he says, "is especially worthy of attention." "*It may be accounted for,*" he continues, "*in many ways*" (italics are ours), "for instance, by change of climate and habits of life, by the increased anxiety and effort to advance in the scale of social respectability, by homesickness, and, in general, by the removal of the props which sustain and steady a man who does not emigrate, but remains in the vicinity where he was born." These, it is true, are exciting, but they are not predisposing causes of insanity, and they are entitled to due consideration, but how insignificant they are, as producing causes of insanity, when compared with the physical agency of a tainted heredity. But he adds (and as if he was accounting for the whole difficulty), "The same increased tendency to insanity may be discovered (but in a less marked degree) in Americans who remove from one section of the country to another, especially from the Atlantic to the Pacific coast." Where he finds his authority for this latter assertion he does not say. The statistics of the Territories (excluding the District), as furnished by his own tables, show that the proportion of native white insane to native white population—the smallest proportion of insane

any large locality in the United States. In California the proportion of insane in the same class is 1 in 658, nearly equal to the proportion in the Southern States, and notably less than in the Northern States. In Oregon, with a small native white population, the proportion is 1 in 575, a proportion which is a little larger than the average of the Northern States. But what a very unsatisfactory basis it is on which to construct a theory to account, by moral disturbances, for the deteriorating effects of an imported and a propagated heredity that produces in 6,000,000 of foreign people, and from more of mixed breeds, a proportion of 1 insane in every 250 of population. Furthermore, before we can accept as satisfactory Mr Wines' statement of the causes of this remarkable ratio of insane to the foreign born, we must ask him to go back to 1850, and explain why it is that the causes he now assigns for the difference, which were just as numerous then as now, and just as potent then as now, did not produce results then as now, for then the proportion was nearly equal in all white classes (native and foreign), while now it is three of foreign to one of all white natives. It will be no answer to this proposal to say that the statistics of 1850 are defective. It is admitted that they are defective in their aggregates, but not in their relative proportions and fairness to the different classes of population.

If the increased aggregate of insanity and the increased ratio of its production in the United States may now be assumed to be proved, the next thing to be considered by us, as practical men, is the remedy. "What are we going to do about it?" It is a question we must carefully consider before we express an opinion, much more before we offer advice.

So far as the increasing ratio of insanity to population is enhanced by the unsanitary life and by the intense exhausting activities of our native population, it is enough, for present purposes, to say that the remedy for all these evils must be found in the diffusion of required knowledge and the operating of nature's conservative laws. If the intensity of our life prove to be the chief factor, our people must learn to live within their vital as well as their pecuniary income.

But the important practical question relates to the abatement of the unnatural increase of insanity by immigration—to the turning back, from our national thresholds, those who come here only to fill to repletion our asylums, poor-houses and prisons, to burden our humanity and our pockets to provide them accommodations and maintenance, and who (worst of all) deteriorate, by inexorable laws and agencies of heredity, the mental, moral and physical endowments of a nation. What are we to do with the defective immigrant?

What do European governments do with him? By the most disinterested eloquence they induce him, and by the most generous policy they "assist" him to become an immigrant, and so they solve their problem. Is any one simple enough to think that this policy is announced in their "blue book," "red book," or any other kind of official book or form? When this policy and practice are charged on their officials, do they not expect them to admit it? One

can easily imagine the reproachful expression of injured innocence, coupled with the complacent folding of his hands across his capacious and compassionate bowels, with which Mr Bumble would receive such an intimation. After he and his official associates had completed and put in use their brilliant invention of work-house diet, consisting of "much water and a little oat-meal," it is also easy to imagine his deprecating gravity when charged with a deliberate purpose to starve the poor to death or—to emigration. But we do not need to resort to fiction nor to Europe to find illustrations of the way the official almoners of public charity receive suggestions that their Bumbleian "political economy" is born of a tricky and dishonest selfishness. Who here has not noticed the American overseer or superintendent of the poor and his air of self-satisfied reticence just after assisting, with charitable railroad fare, a poor family to—the next town?

But what have we done, in the past, with the defective immigrant? As stated in another place and for another purpose the Legislatures of several seaboard States having ports of entry have tried, by law, to protect their people from the unnatural burthen. But all in vain. They, too, have tried the "move on" policy, and these foreign "poor Joes" have moved on and are now "moving on," by tens of thousands, to other States in the interior, to be, wherever they are, a public charge, and a living pestilence. And what have these States, in the interior, done? Nothing—except to bear a great, a needless, but a hitherto unavoidable burthen.

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interests of commerce or of proper immigration. You must appeal to Congress, whose jurisdiction in the premises is supreme and exclusive. The necessity of an appeal to our Federal Legislature brings this paper to this body of sanitarians, whose members come from all the States, all being affected by the curse, and especially the Northern States and Territories.

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1. The true place to prevent the coming of the unwholesome and the dangerous immigrant is not at the port or point of entry, but at the port of departure. Of this it may be said, at once, we cannot enforce our laws and rules on a foreign soil and under a foreign Government. Perhaps we can—wait a little and see.

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perts A constitutional basis beyond controversy and a grand function are furnished right here for a national board or bureau of health and immigration

3 Organized properly, it should have at all ports in the United States, where immigrants arrive, all needed agents and representatives, but more important than all its agents should be attached to consular offices or agencies abroad wherever needed

4 Aliens proposing to travel or trade temporarily on our soil should so declare or affirm at a consular office, and receive a consular certificate showing their avowed purpose

Every other alien proposing to emigrate to the United States should be examined, should furnish proof (in form and kind such as the law may specify) to satisfactorily show that he has never been convicted of crime (political offenses excepted), that he is not insane and never has been, that the same is true of his wife and children if he have them, that insanity has never afflicted his parents, or either of them, and that he is not a pauper, and never has been because of any permanent inability to support himself by labor If the proposed emigrant is found to fulfill all legal requirements, and not likely to become a public burden, a certificate, jointly executed by the consul and the public health agent, containing his full personal description, and showing his healthy character, should be given him This consular ticket, in effect, will be much like the clearance papers given to a vessel departing for one of our ports, which is often called "a clean bill of health"

The cost of the plan may be defrayed as the existing law is—by taxing all immigrants But this should not be done This Government should be ashamed to levy such a tax A law that will effectively protect us from defective immigrants will soon save its cost of enforcement by reduced taxes in the States to support them It will cost less to enforce an efficient law than it now costs the people to do nothing

Mr President and gentlemen, if we use our influence in our various relations, and vigorously present the facts disclosed by the census of 1880, we shall soon be able to secure favorable action by Congress

The proposed legislation may be opposed, but not openly, except by those ignorant of the extent of the danger The statistics—the facts—must be our chief weapons, and with them the battle can be won

At the conclusion of the reading of the paper, Dr Edzie offered a resolution expressing as the sense of the Association that legislation should be taken by Congress at its coming session to put a stop to the coming to this country of the criminal and pauper classes and those with an insane heredity, and, on motion, the rules were suspended for the purpose of taking immediate action upon the resolution

Dr Wight hoped that the resolutions would go to committee for consideration He was not prepared to charge the governments of Europe with wilfully and maliciously shipping off their criminals and insane people to this country

Dr Devron said that in New Orleans it is impossible to go a block without meeting foreign paupers and foreign beggars exhibiting their deformities and asking charity

Dr Walcott, President of the State Board of Health of Massachusetts, said it is an indisputable fact that our poor-houses are filled with foreign paupers, our hospitals with foreign cripples, and our insane asylums with foreign insane persons

Dr Ames said that to defer action for a year is to lose a year, and in view of the slowness with which Congress acts in international matters, it is best to lose no time

Dr Gihon moved that the resolutions be referred to the Advisory Committee, that the Chairman submit the same to its various members, and if a majority thereof favor them, that they be transmitted to Congress

The question of expediency was discussed pro and con by several members, and then a motion to lay the resolutions on the table was lost, 15 to 23

Dr Gihon then withdrew his motion

A motion by Dr Wight, to refer the resolutions to a special committee, to report at the next meeting, was lost

The resolutions were adopted, 30 to 1

NEW ANÆSTHETIC MIXTURE DEvised BY WM A. BYRD, M D, OF QUINCY, ILL —ITS COMPOSITION AND EFFECTS

BY CHARLES WESLEY ROOK, M D, QUINCY, ILL

This is a compound anæsthetic, recently prepared by Dr Wm A Byrd, Quincy, Ill, and so far as I know, he is the only surgeon who is, at present, using it It is composed, by measure, of bromide of ethyl, one part, chloroform, three parts, alcohol, four parts These substances, mixed, form a clear solution, of a pleasant odor, and of a warm, sweetish taste

HISTORY OF THIS ANÆSTHETIC

Dr Byrd, not being satisfied with the anæsthetics in general use, having seen two deaths from chloroform, one occurring in his own practice, and disliking the stimulating or exciting properties of ether, began experimenting to see if he could not discover or prepare an agent which would better suit him for anæsthetic purposes Knowing the physiological actions of chloroform, that the greatest danger from its use lay in the extreme anæmia of the brain and nervous system, that in this condition of anæmia, there was not sufficient blood carried to the nervous centers controlling the organs of circulation and respiration to enable them to continue their functions, and thinking that if he could combine with the chloroform, some agent that would overcome this tendency to extreme anæmia, without impairing the anæsthetic properties of chloroform, his object might be obtained

Having a knowledge of the physiological properties and actions of ethyl bromide, and its power of causing congestion of the face and brain, he was led to begin experiments with these two agents The result of these experiments proved to him that if these two agents were combined in the proportions of three parts, by measure, of chloroform to one part of ethyl bromide, the anæmic and depressing action of the chloroform was counteracted by the ethyl bromide,

can easily imagine the reproachful expression of injured innocence, coupled with the complacent folding of his hands across his capacious and compassionate bowels, with which Mr Bumble would receive such an intimation. After he and his official associates had completed and put in use their brilliant invention of work-house diet, consisting of "much water and a little oat-meal," it is also easy to imagine his deprecating gravity when charged with a deliberate purpose to starve the poor to death or—to emigration. But we do not need to resort to fiction nor to Europe to find illustrations of the way the official almoners of public charity receive suggestions that their Bumbleian "political economy" is born of a tricky and dishonest selfishness. Who here has not noticed the American overseer or superintendent of the poor and his air of self-satisfied reticence just after assisting, with charitable railroad fare, a poor family to—the next town?

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and that the excitement and congestion of the brain caused by the ethyl bromide was antagonized by the chloroform, so that, in the production of anæsthesia, there was no noticeable or marked change in the blood supply of the face and brain

PHYSIOLOGICAL ACTIONS OF THIS ANÆSTHETIC

I have administered this anæsthetic to a number of patients, varying in age from early childhood to adult life, to those enfeebled by disease or suffering, and to those apparently healthy, for operations comparatively trivial, and for others which were protracted and serious, inducing and sustaining complete anæsthesia, in some cases, only for a few moments, while in others for more than an hour, and in all these cases, with their varying circumstances and conditions, I have observed a remarkable similarity in the physiological actions of this anæsthetic. The stage of excitement or intoxication is brief, sometimes absent, if occurring, is never violent. The stage of spasmodic rigidity of the voluntary muscles seldom occurs, when occurring, it is not extreme. Following these stages, when they are present, or within a few minutes from the commencement of the inhalation, the stage of complete anæsthesia is induced, when any unfavorable or alarming conditions or symptoms occurring in the preceding stages, as excitement or rigidity, will be relieved, so that the vital functions are carried on as regularly, and apparently as effectually, as if the patient was in a natural physiological sleep.

The time required to produce complete anæsthesia is from one to three minutes in children and from three to five, and possibly eight minutes in adults. When inhaled, and especially if inhaled through the nostrils, patients will sometimes complain of a choking or suffocating feeling, probably due to some spasmodic condition of the glottis or larynx, which is quickly relieved by requesting the patient to inhale, through the mouth, three or four deep inspirations. Sometimes, though very seldom, coughing will be caused, perhaps due to the action of the anæsthetic vapor upon the over-sensitive bronchial mucous membrane, but it is quickly checked by pushing the anæsthetic a little more rapidly. Nausea and vomiting may occur, more apt to when administered soon after eating, and, like coughing, may be checked by crowding the anæsthetic a little faster.

Effect upon the eyes.—Soon after the inhalation is begun, and especially if the stage of excitement is present, the pupils are dilated, but when complete anæsthesia is induced, they are more or less contracted, the conjunctiva is usually insensible to irritation, but I have seen a case in which the degree of anæsthesia was sufficient to admit of the thorough and extensive application of the actual cautery, and yet the conjunctivæ remained sensitive, and the pupils responded quickly to light.

Effect upon the circulation.—At the commencement of the inhalation, the pulse, either from excitement or in anticipation of the coming operation, would naturally be somewhat quickened, but when complete anæsthesia is induced the pulse becomes slower, fuller and stronger.

Effect upon the respiration.—This is at first stimu-

lated, but when insensibility is induced it becomes slower and more regular, very much resembling the respiration of natural sleep.

Effect upon the temperature.—It is generally lowered more or less, as the skin is usually moist, and occasionally free perspiration occurs.

During the stage of complete anæsthesia, the eyelids are closed, the face retains its natural color, so that the countenance looks peaceful and placid.

The duration of the stage of anæsthesia is variable, in some, complete consciousness returns within a few minutes after the administration is discontinued, while in others the stage of anæsthesia seems to be followed, without any intermission, by a period of natural sleep which may continue from ten to thirty minutes, or even longer, from which, on awakening, the patients seldom have any symptoms referable to the anæsthetic.

In the preparation of this anæsthetic, it is believed that no new chemical compound is produced, that the ingredients, not entering into a chemical union, simply form a mixture. The alcohol was added as a diluent or vehicle for the better administration of the chloroform and ethyl bromide. Although alcohol, alone, is employed by some, more especially by Dr John E. Link, of Terre Haute, Indiana, but little of the virtues of this anæsthetic, except, perhaps, the sleep following the stage of complete anæsthesia, are attributed to the alcohol.

ADMINISTRATION

Because of the quantity of chloroform entering into its composition, a considerable amount of atmospheric air should be inhaled along with the anæsthetic. It has been administered most frequently through an inhaler,—Dr Jos C. Hutchinson's, of Brooklyn, N. Y. But the same results have been obtained when simply a towel was used as an inhaler. At the present date, Nov 30, 1883, anæsthesia has been produced in ninety-eight cases, without causing any bad effects, save vomiting in three cases. The quantity necessary to induce and sustain anæsthesia, depends, of course, upon the duration of the operation. A half drachm poured into the inhaler, or upon a towel, will generally be sufficient to induce anæsthesia, which may be sustained by the addition, from time to time, of half the former quantity.

MEDICAL PROGRESS

THERAPEUTICS AND MATERIA MEDICA.

NITRITE OF SODIUM AS A TOXIC AGENT.—Drs Sydney Ringer and William Murrell have given the result of their observations on this drug (*Lancet*), and conclude that as the drug now found in the market is almost pure, much greater care must be taken in its use than formerly, when it was a mixture of nitrite and nitrate of sodium, the latter predominating. In those cases in which twenty grains are stated to have been given three times a day for three months or more, the drug was undoubtedly impure, for so large a dose could not have been administered.

for so long a time with impunity. If the pure nitrite of sodium were administered in the doses in which the impure drug was formerly given, the effects might be disastrous.

In describing the toxic effect, they accept the conclusions of Reichert, quoting him as follows: "The nitrites cause the arterial and venous blood to become of a uniform dark, venous color, having a distinct brownish or chocolate shade, and that this is due to the conversion of the oxyhæmoglobin into a nitrite oxyhæmoglobin, and that the nitrite blood possesses very little oxygen-absorbing power, and as a sequence, hæmic respiration is seriously interfered with and tissue metamorphosis diminished." The respiratory movements are primarily stimulated by the asphyxiated blood, and then depressed, while there is a loss of contractility in the voluntary muscles. Eighteen adults took, under their observation, ten grains of the pure nitrite of sodium in an ounce of water, with the result of producing extremely marked and disagreeable symptoms of faintness, nervousness, and pain in the head. Sixteen patients were then given five grain doses, with the same symptoms resulting. Nausea with eructation was of frequent occurrence, and in one or two cases there was actual vomiting. Thirteen patients were given three grain doses, only four complained of the symptoms, which were of the usual form—nausea, blue lips, headache, and giddiness.

ON THE USE OF LYTHRUM SALICARIA.—Dr Campardon, in the *Bulletin Général de Thérapeutique*, extols the use of this remedy very highly in acute or chronic inflammations of the gastro intestinal mucous membrane. In his opinion, the previous want of success in its use has been due to the way in which it has been prepared, as for example, it has been used more as a decoction than as an infusion—containing tannin and a large proportion of mucilage, as it does, a prolonged *coction* would destroy the mucilage. He cites cases of dysentery, of acute and chronic diarrhoea, particularly when dependent on an atonic condition of the intestine—or as observed in the convalescence of typhoid fever—and in the diarrhoea of children occurring in the course of dentition, where he has readily and easily checked the disorder. The drug has shown that it has not only a slightly astringent character, due to the tannin, but also that the mucilage quiets the pain, modifies the secretions, and manifests a general sedative action. The effect of the drug does not seem to be to produce the dry, painful constipation, as with bismuth, for example, but rather to restore the condition of the bowels and stools to their natural state. An excessive dose (10 to 12 grammes per day), will produce a gastric disturbance, giving the mouth a taste of the drug and increase in the number of passages to sometimes six per day, and a diminution of the appetite. In affections of the buccal mucous membrane, as ulcers and aphthæ, the tincture of lythrum has been very serviceable. In coryza, acute vaginitis with hypersecretion, chronic catarrhal vaginitis, vulvar prurigo, eczema and intertrigo, the drug, powdered and applied locally, has proved beneficial. In the acute stage of varicose

ulcers, the powder of lythrum has lowered the temperature, relieved pain and hastened the formation of the cicatricial pellicule, the ulcer being washed morning and evening with a strong infusion of lythrum, and the powder renewed daily over the surface of the ulcer. Its use has been recommended in hæmoptysis, but Dr Campardon tried it in several cases without success.

The preparations are Infusion—30 to 40 grammes of the leaves and incised stalks to 1,000 grammes of water.

Powder—3 to 5 grammes in 24 hours, 1 gramme in a wafer as a dose. The highest dose used was 8 grammes, in a case of chronic diarrhoea of four months standing, which was relieved in less than three weeks.

Extract—2 to 4 grammes a day, in solution, children take readily a syrup made of 1 gramme of the extract to 30 grammes of syrup, given by the coffee-spoonful each hour. The extract mixed with the powder to form pills of 20 centigrammes each, is more acceptable to some persons than the powder alone.

Tincture—20 drops on a lump of sugar, four or five times a day.

For external use—3, 4 or 5 tablespoonfuls in a sufficient quantity of water to form an injection or lotion—or dissolved in the tincture of salicylic acid (1 gramme to 25 grammes), two or three tablespoonfuls in a sufficient quantity of water as an injection or lotion.

SURGERY

TREATMENT OF FRACTURE OF THE PATELLA.—At the one hundred and eleventh session of the Medical Society of London, so the *Medical Times and Gazette* tells us, Prof. Lister recorded the treatment of seven cases of fracture of the patella, which were cut down upon and wired together. The operation consists in making a longitudinal incision over the middle of the patella, cleaning out of the knee joint any blood clots which may have collected, freshening the broken surfaces of the patella, and then wiring them together. In this manner bony union is secured. The cases were of two kinds—recent, and those in which some time had elapsed since the fracture, and where there was fibrous union, with a greater or less interval between the fragments. The recent cases are, of course, the more easy and satisfactory to treat, there is no difficulty in approximating the fragments after the blood clot and effused matter have been sponged out of the joint. But, in the older cases, the fragments are often widely separated, possibly there is contraction of the quadriceps tendon, which must be divided, or the fragments of bone may be atrophied. Examples of these conditions, with the result of the operation, were exhibited to the meeting. It would be impossible to speak too highly of the results obtained—bony union of the fragments, with almost perfect movement of the joint, had resulted in every case.

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gives us, in the *Marseille Medical*, what might, on a pinch, almost furnish material for a winter's surgical course. The case in question was a man 42 years of age, and the interest in his case consists in enumerating the injuries which he received, at various times in his life, and satisfactorily recovered from.

As a zouave in Italy he received a bayonet wound in the neck, of which he carried the scar, in the left hand a sabre cut, which required the removal of the fourth and fifth fingers. A gunshot wound fractured the condyle and epicondyle of the right arm, causing great difficulty in supination. On his discharge from the army he worked as a day laborer, when a bank of earth falling on him, he was taken to the hospital and found to be suffering from concussion of the brain, with fractures of the inferior extremity of the right radius, of the left leg, six centimeters below the knee, of the sternum five centimeters from its superior extremity, so that at each expiration the lower extremity glided forward in front of the upper, of the third, fourth, eighth, ninth, and tenth ribs, about their middle, the cartilages of the fourth and fifth ribs being also the seat of a solution of continuity, and of the second and third lumbar vertebrae. After passing through a serious attack of pneumonia while in the hospital, the patient recovered, with a slight deformity of the sternum (a riding up of the fractured ends) and a numbness in the right leg, he being obliged to use a cane. There was no cough and no difficulty in respiration, the left wrist was slightly deformed, flexion and abduction of the hand being difficult. The bladder remained irritable, but there was no constipation.

His third visit to the hospital was for the treatment of a burn received in a soap factory—slight in degree, but involving a large extent of surface over the abdomen and back, resulting in a diarrhoea and death. The autopsy was most interesting in the study of the fractures of the sternum and vertebrae. The union of the sternum was so complete that an incision in the median line did not show any separation between the two fragments. The condition appeared as that of congenital deformity. The fracture of the vertebrae was one of crushing and penetration, the third lumbar vertebra had been crushed by the second, which penetrated into its tissue so that the intervertebral cartilage had disappeared, and in the midst of the solid mass formed by the two vertebrae only one line of separation was perceptible, and that on the inferior face of the superior vertebra.

MEDICINE.

A CASE OF LIGHTNING STROKE—John Gale Mackay, M.B., gives in the *Glasgow Medical Journal* the details of a case, with a photograph, which delineates that curious arborescent appearance upon the surface of the skin which has been before described, but which is so rare, and remains usually for so short a time, that many doubt its existence.

This case was a boy of thirteen, who was marked upon the arms, and the photograph was taken four hours after the accident. The marks began to

fade three hours after the accident, and in 22 hours they had entirely disappeared. The boy was stunned by the shock, and thrown down with such violence as to be severely hurt about the face and forehead. The arms were paralyzed in motion for a time, the boy being unable for some time afterwards to draw his hands out of his pockets, where they were placed at the time of the accident, there was also a sensation of numbness and cold, and the boy fancied that his arms were broken off at the elbow. Later, upon his complaining of a burning heat in the arms, they were examined and the markings noted. These markings seemed to radiate from two centers, as if the lightning had first struck the arm in two places, and had thence broken over the surrounding skin. They stretched from below the left elbow to the shoulder, and threw branches across the left chest, resembling closely images of the fronds of a fern. There were no local after effects, such as vesication or shedding of the skin.

TOXICOLOGY AND MEDICAL JURISPRUDENCE

POISONING FROM EATING SNAILS—Our French neighbors, since Dr Chrestien affirmed that snails constituted a most effectual remedy against diseases of the chest, have given them most marvellous properties, and indulged their appetite for them to an increased extent. Now, we find in the *Gazette Hebdomadaire des Sciences Medicales* the record of four cases of poisoning from eating three to thirty snails. These cases all occurred in one family, as the result of one meal, and the symptoms were those of colic, vomiting and purging, with nervous prostration. It seems that snails to be suitable for eating have to undergo first a process of starvation and purging to dispose thoroughly of certain offensive and poisonous articles of food which they are fond of. So the writer, Dr P Ducloux, declares that eight days of starvation is not long enough to effect this process, and that forty days should elapse. Where is the Society for the Prevention of Cruelty to Animals?

ANATOMY AND PHYSIOLOGY.

A CASE OF ANOMALY OF THE URETERS—M. M. P. Souge describes in the *Marseille Medical* an autopsy made on a man 54 years of age where the left kidney was provided with two ureters. They were completely independent at their origin and throughout their entire course, uniting at the vesical portion and forming a single orifice at the level of the trigonum. They originated in the pelvis of the hilum—one by six calices, and the other by two calices. As they entered the walls of the bladder, they were separated by an interval of three millimeters, to unite while passing through the walls of that organ.

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SATURDAY, DECEMBER 15, 1883

COLLECTIVE INVESTIGATION OF DISEASE—A few weeks since, after explaining the system of the Collective Investigation of Disease inaugurated by a committee of the British Medical Association, we invited such members of the profession in this country as were willing to engage in such work to send their names to the office of this journal and we would see that they were supplied with the proper memoranda and cards, with a view of inaugurating the work in this country in harmony with that in England. A communication was received from the committee of the British Association inviting co-operation, and presented to the recent annual meeting of the American Association in Cleveland. It was received and referred to a standing committee, already appointed, with instructions to report at the next meeting of the Association. In the meantime, a committee of the Illinois State Medical Society has caused the printing of several of the most important memoranda and cards issued by the committee of the British Association, and in addition to supplying the members of that society, it has placed at our disposal a sufficient number to supply any others who might respond to the invitation given in this journal to send in their names.

As explained in the previous editorial on this subject, the printed memoranda in relation to the diseases to be investigated, are simply intended to call the attention of the investigators to the more important topics to be noted. Only two cards on which to make returns of cases will be sent to each member of the Association whose name has been re-

ceived. But as many more as may be desired will be furnished to those who return the first two properly filled accompanied by a promise to continue the work. As members of the committee to whom the subject was referred at the last meeting of the Association, we have felt at liberty to encourage these practical steps in advance, since it could be done without drawing any funds from the treasury of the national organization. And the results may enable the committee to make a more reliable report on the feasibility and value of the whole scheme than would be possible without them. All members of the Illinois State Medical Society may return their cards as soon as filled directly to Dr J. F. Todd, Chicago, who is Secretary of the committee of the State Society. But all members of the American Medical Association, not members of this State Society, may return their cards as soon as filled to the editor of the JOURNAL, 65 Randolph St., Chicago, and at the same time indicate whether they wish more blank cards.

PHYSIOLOGY AND HYGIENE IN LITERARY COLLEGES—In a considerable number of the best colleges and universities in our country, some attention is given to instruction in physiology and hygiene, but in none of them do these important branches of science occupy the prominent position in the curriculum of studies that they merit. We notice, with pleasure, that Center College, at Danville, Kentucky, has recently created a lectureship on Physiology and Hygiene, and filled the place by appointing Dr Louis S. McMurtry, of that city. This is certainly an educational step in the right direction, and the selection of the right man for an important position, one preeminently fitted for the work assigned him.

CHANGES IN MEDICAL JOURNALS—From the notices received during the last week, we judge that the ambition for publishing weekly medical journals, so strongly manifested during the last few years, has passed its climax and entered upon the stage of decline. It is only one or two years since the *New York Medical Journal*, *Gaillard's Monthly*, and the *Sanitarian*, all well established monthly medical periodicals, donned the weekly dress, making, with the *Medical Record*, four leading weekly medical journals in the city of New York. The second one named returned to the monthly form before the end of the first year, and with the last *Sanitarian*, comes the notice that it will also be returned to the form of a monthly with the beginning of the new year. We also learn that the *Pittsburg Medical Journal* has closed its career for the present, at least, and its late

able editor, Dr Thomas Gallagher, proposes to visit the countries on the other side of the Atlantic With the December number of the *Medical Herald*, of Louisville, its late able editor and proprietor, Dr Dudley S Reynolds, retires from his connection with it, having sold his interests to the publishers It is announced that Drs Edward Miller and W N Galt are to be the editors under the new arrangements We congratulate the retiring editor, both on account of the reputation he has won and the prospect of more peace in the future, and cordially welcome his successors to a field of labor affording opportunities for much usefulness, but not altogether blooming with roses

NOTICE—A neat little medical periodical, called the *Polychmie*, which does a part of the advertising for a circle of specialists in Philadelphia, recently headed its leading editorial with the announcement, "A Proof Reader Wanted!" Now, if our sprightly neighbor of the Quaker City really needs a "Proof Reader," we would kindly inform him that during the past few months we have had two or three connected with this office whose services are no longer needed, and we presume one of them might be obtained, provided fair wages were offered

TO SUBSCRIBERS—The first volume of this journal will be completed with the last number in this month, that all subsequent volumes may commence with the first weeks of January and July of each year The last number of each volume will be accompanied by a title page and index All members of the Association who pay their membership dues receive the JOURNAL for one year, thus getting two large volumes per annum Subscribers who are not members of the Association, and consequently have less interest in preserving a complete series of volumes, can commence their subscriptions with either January or July, and have the volumes for which they subscribe complete, without taking back numbers Consequently, now is a good time for new subscribers to make their remittances, to commence with the first of January, 1884

NEWS ITEMS

DISEASE ON THE TAPIS—Under this heading, the *British Medical Journal* says "A correspondent of the *Standard* very judiciously points out that the present eccentric fashion of furnishing drawing rooms with old Oriental rugs is both offensive and hazardous These rugs, when they are what they are represented to be, have been used as 'passage rugs' for long periods, sometimes reaching up even a hundred years, and must, in many instances, have been

knelt upon by persons affected with leprosy and other loathsome diseases Now, the odor of sanctity is not a good disinfectant, and the danger is that these faded and frowsy floor-coverings may import amongst us some very unpleasant maladies Old Persian rugs should either be banished from English homes, or should be baked before being introduced into them, to a degree that will add the charm of singe to that of tinge "

MAFIOUSION OF A TOOTH—The *Lancet* records a case of supposed tumor in the left nasal cavity, which, on its removal, proved to be a tooth resembling a canine tooth It occurred in a boy of fourteen years of age, who had got his set of permanent teeth, with the incisors and canines entire on either side There was no deformity of the jaw and no swelling or cystic formation It was clearly a case of extra follicular development and eruption of a tooth in a wrong place The dental follicle was transposed, and the eruption was from above downwards, the root being deeply imbedded in the side and upper part of the antrum

PROF EMIL DU BOIS REYMOND—At Berlin University on Oct 20, was held the twenty fifth anniversary of Prof Reymond's occupancy of the chair of Physiology, in the presence of Ludwig, Heidenham, Rosenthal, Bernstein, Holmgren, Leube, Gad, and Tschirner Prof Heidenham made the presentation of his bust Prof Rosenthal gave a jubilee volume of the *Archiv fur Physiologie*, which contained contributions from seventeen of Prof Reymond's former pupils, all of them now well known in the various continental universities

SOCIETY PROCEEDINGS

THE CHICAGO MEDICAL SOCIETY

At the meeting held on the 3d inst, at the Grand Pacific Hotel, Dr E L Holmes presided, and two original papers were read

The first was on the Treatment of Bright's Disease, presented by Dr Charles W Purdy, and is a very lengthy article, and concludes a series of three papers the writer has prepared and read before this Society during the past year, comprising in all at least 400 pages of manuscript

This last one is very comprehensive, and from the wide range of therapeutical remedies used in this disease he has narrowed to a much lesser number, and determined more accurately their efficacy which was very desirable The following is a brief abstract

Bearing in mind that the chief function of the kidney is the removal of nitrogenous waste from the system, it is possible to lay down a few general rules for management of the whole class of diseases ranged under the term of albuminuria, especially when they reach a point in their progress which seriously embarrasses the function of the organ First in importance, then, may be reckoned the diet of the albuminous patient The doctrine of a bold resort to nitrogenous diet, is a very dangerous one to practice, especially so in nephritis, for the loss of albumen

by the kidneys, unless very extreme, does not cause the alarming waste that many are led to suppose, and the rapid anæmia of Bright's Disease is not alone due to waste of albumen, but to the overcharging of the blood with tissue waste, which renders that fluid unfit for healthy nourishment, and the pernicious effect of still further loading the blood with highly nitrogenized foods not only increases the evils it is intended to remedy, but it is pretty sure to lead to the most dangerous of complications, namely, that of uræmia.

In treating renal difficulties of this nature, we must bear in mind the importance of retrograde metamorphosis of tissue being present, and as the writer quoted from Fothergill, "that creatinin, tyrosin, and other early products of tissue decay, are in themselves powerful narcotic poisons, but do not pass on into uric acid and urea," hence, only small quantities of nitrogenous foods should be partaken of, with the view of repairing tissue waste, especially as the patient is not taking active exercise. In substance, then, the albuminuric patient's diet should consist of the farinaceous articles, also fish, vegetables and fruits, while meats are to be indulged in sparingly, soups are to be prohibited, and eggs excluded. Cheese must not be used. Fats may be used as freely as the condition of the stomach will permit. Milk constitutes one of the best articles of diet, and small meals, more frequently repeated than usual, is a good rule to follow. Alcohol in large quantities, especially in a concentrated form, is generally believed to be injurious, if it is given at all, it should be well diluted with Vichy or Apollinaris water in excess, whilst the lighter pale ales, or Bavarian beer, are nearly free from objectionable qualities.

The skin should receive systematic care in all forms of albuminuria, and warm flannel under garments must be insisted upon, with no deviation from being constantly worn, and even so with the care of the feet, which must be no less rigid. The various fabrics and garments used should at all times be dry. The avoidance of exposure to vicissitudes of the weather must be particularly borne in mind. Regarding the climate, it is a fact, that in the two extremes of temperature—the arctic and torrid zones—albuminuria is rare, for reasons, well set forth, that there is the compensation of a tendency to other diseases in those climates, either of the respiratory organs or in the cutaneous system, and intestinal disorders, although amyloid disease of the kidney may sometimes arise in hot climates. The primary seat of this disease, however, is almost never in the kidneys. In America, Mexico presents many advantages, in Europe, the Mediterranean coast seems to give the best results. Rome, Cairo, and the south of France may also be particularly mentioned.

Diuretics—Under this head of therapeutic measures, much can be said, namely those that act by increasing the general blood pressure in the vessels, and those that act locally on the kidney circulation and renal epithelium. Digitalis and convallaria majalis are regarded as fulfilling the first indication, mineral waters also produce this effect. Such agents as juniper, buchu, and some of the resins, if judiciously employed after the subsidence of the acute in-

flammatory conditions, are often productive of much benefit, also several glasses of distilled water taken daily, and the Silurian water freely drank, and Vichy, may be commended, the latter especially so in cases of gouty history. The Buffalo Lithia Springs water is also valuable in such cases.

Acute parenchymatous nephritis must be met with energetic antiphlogistic measures, and a more successful result will be attained if they be promptly resorted to. We should first secure thorough action of the skin and alimentary canal, and then limit the inflammatory progress going on in the renal tissues. The dry hot air bath is the most efficient means to fulfill the first indication. This practice is the one *par excellence* above all other baths, and the safer method. With it rapid perspiration is induced, and the bodily temperature does not become elevated beyond a degree, or at most a degree and a half. On the contrary, with the Russian bath, the temperature may increase three or five degrees, and the pulse to 150 or 160, and if any heart trouble be present the latter system of baths might prove pernicious, or if uræmia is threatened, the Russian or steam bath might induce convulsions. With the hot air bath a patient may be subjected to free diaphoresis for an hour or two with but little exhaustion. This means should be resorted to daily for an hour, in cases of acute nephritis. The perspiration thus set up may be continued by administering some warm drink. Another remedy may be employed, namely, jaborandi, or pilocarpine, as a diaphoretic. Free catharsis at first unloads the congested blood-vessels, and promotes osmosis and absorption, and should be resorted to, but the subsequent treatment may consist in giving mild aperients. All writers agree that dry cupping is highly efficacious, to be followed with the application of large warm poultices. Mustard may be added to this, and later croton oil liniment, but fly blisters or turpentine should not be used, nor juniper or squill, for they may probably add to the renal congestion, and the writer preferred above all other remedies the following agent, viz, digitalis, as being the most representative. Milk diet should be adhered to in this as heretofore, to the exclusion of meats, and the patient should remain in bed until the acute symptoms have subsided. We should be on the alert for uræmic symptoms. If this complication should appear, the hot air bath should at once be resorted to, its use prolonged until copious diaphoresis is secured, followed with a brisk purge, etc. also bromide of potash, chloral, and chloroform, and perhaps hypodermics of morphia. In this form of inflammation it may be necessary to resort to venesection. If acute chest affections supervene, the usual antiphlogistic measures employed in these inflammations should be supplemented to the foregoing remedies. If dropsy should set in as an obstinate symptom of acute nephritis, special measures for relief of this may be called for, as local erysipelas and even gangrene possibly may supervene, dependent upon that symptom. Punctures of the skin may be necessary, but to do so may endanger sloughing etc. The trocar or aspirator may be resorted to as a temporary measure to remove fluids from the abdominal cavity.

chest, or pericardium American hemp may be used with happy results Given repeatedly, the diuresis arising from the use of this remedy is sometimes very copious indeed

In chronic nephritis, substantially the same principles for treatment should be carried out as in the acute form, although the remedies should be given in smaller doses and continued systematically for a long period of time However, one or two other favorable diuretics may be mentioned, viz, the citrate or acetate of potash in treating these cases, or to combine the compound fl ex buchu and pareira brava with the acetate, will add to the efficacy of the potash salt, Iron is also required for the anæmia that necessarily must be one of the results of this form of malady, and also removal to a warm climate during the winter months is advisable

Granular degeneration, which is the most tardy and chronic in its course of all kidney diseases, may extend over a period of fifteen or twenty years, and more than is in the reach of therapeutics can be done, and greater relief afforded, by removal to a warm climate, although a case thus established of renal fibrosis may be nearly hopeless, yet the disease may be arrested and thus limited to a portion of the gland which is already involved, by removal to a temperature of 60° or 70°, with a dry atmosphere, such as Riveira and portions of Italy or Egypt possess, and are recommended as the most healthful for this class of patients In Rome the disease is almost unknown Cairo is also lauded, which is situate in Egypt, on this continent, Durango, in Mexico, is spoken of as a climate to be selected, as here the extremes of temperature are but 60° and 80°, and many superior advantages may be had in that country for this class of invalids that are not accessible elsewhere

The rules already laid down regarding the careful regulation of the diet must be strictly adhered to, as well as the other adjuvants for lessening nitrogenous waste in the blood, must be faithfully pursued In all rational treatment, however systematically and judiciously devised, for renal diseases, we must have constantly in view threatening dangers For, in Bright's Disease, cerebral apoplexy, uræmia, hypertrophy of the left heart, and other dangerous complications are constantly liable to occur Iodide of potassium and the chloride of gold have been recommended as exercising a direct curative action on the kidney The latter remedy has a tonic action on the stomach and uniformly improves the appetite, and may, in this manner, have a curative effect on the disease proper For dizziness, palpitation, heaving of the chest wall, oppression full tense pulse, etc, rest, low diet, cardiac sedatives, etc, are indicated Iron may be given to counteract advancing anæmia, as is done in the chronic stages of nephritis

Amyloid disease, which differs essentially from the preceding forms, in its nature requires, therefore, a different method of treatment The causes of it are quite outside of the kidneys themselves, and our measures will be more largely directed to these outside influences In this form of kidney disease we seldom have to contend against the dangers of uræmia, save near the close of its course We are

thus enabled to give stronger meat diet than in the other lesions The progress of this disease, i e, lardaceous kidney, may therefore be controlled just in proportion to that extent to which we are able to control that which gives rise to it, and as dysentery, phthisis, chronic abscess, necrosis, tertiary syphilis, etc, etc, are the most prolific causes of it, we affirm they are, to say the least, not incurable

Tuberculosis, which is, perhaps, the most fruitful source, requires such principles of treatment in accordance with mature experience to overcome it, as the scientific practitioner may employ Surgical measures may overcome suppurative processes, and Listerism, thoroughly employed in all its minutie, may be found necessary to overcome this malnutrition and drain, and by this procedure we may be enabled to strikingly diminish the amyloid progress

In this form of disease we may have a most obstinate form of diarrhœa to contend with, due to the degeneration of the small intestinal arteries, the epithelium of the mucous membrane, and the muscular coat of the villi

Sulphate of copper in one-eighth to one-fourth gr doses, combined with some form of an opiate, should be preferred to all the other remedies to overcome this complication, but its pathological cause may often times result in a patient's death from the intestinal flux that sets in Visceral complications are apt to make their appearance, being a part of the same process of degeneration of blood-vessels and deposit of the peculiar amyloid material, as that which forms in the kidneys

In the foregoing review, the principles involved in the treatment as mapped out by the author, have been studied, rather than the writing of details, which can more safely be left to the judgment of the intelligent physician

In the discussion, Dr R Pilley said he doubted if uræmia was the cause of convulsions The nervous system, however, is disturbed by the action of the kidneys, and through its influence may bring about this result The retina undergoes great change of structure, sometimes, in kidney disease, as is seen by aid of the ophthalmoscope A French physician has recently discovered albuminuric retinitis in one eye of a patient, while the other eye remained healthy The trouble in the eye increased or diminished, as the albumen increased or diminished Regarding the baths, he thinks a patient's bodily temperature will rise higher by the use of a dry hot air bath And, regarding the diet, thinks we should pay at least as much attention to the likes and dislikes of a patient in this as to the chemical constituents of the food, whether it be of carbo-hydrates or nitrogenous

Dr I N Danforth does not have as good results from the warm baths, of any kind, as from using a steam bath made of six bricks folded in a towel and hot water poured on them, when they are under the bed-clothes of a patient, while he is in bed This crude steam bath works much better than any with which he is acquainted In using any other form of bath, patients complain of faintness, nausea, exhaustion, etc He thinks the paper is an excellent résumé of the therapeutics of Bright's Disease Dr Purdy has no

doubts about the uræmia being the cause of convulsions in Bright's Disease, and also that uræmia produces puerperal convulsions. The pathology of the kidneys of a woman having puerperal convulsions from uræmia is the same as in acute nephritis, and the convulsions are similar. The dry hot air baths are endorsed by high authorities. By this means the heat is conducted more readily from the body. The diet is of the utmost importance, especially regarding meat in nephritis and granular atrophy, in which it is positively pernicious, although some resort to it boldly. But the food that consists mainly of carbohydrates should be preferred.

Dr G C Paoli—Few of us can diagnose true kidney disease early. It takes months to do it. Cirrhosis we cannot diagnose at first. I do not believe in the use of pilocarpine. Keep the bowels open freely and with good, wholesome food, is about all that can be done with this class of patients, as we ordinarily see them here.

This was followed by Dr F C Hotz, who read a paper on "The Treatment of Granulated Eye-Lids with Jequirity," giving the result of his experience on sixty-five eyes, by using an infusion of the jequirity seed of the Brazilian shrub. The remedy is popularly known as sea bean, and was introduced by Dr Wicker, of Paris, as a valuable remedy for trachoma. The infusion is prepared by macerating the pulverized bean for twenty-four hours, and has a very peculiar effect upon the conjunctiva, producing a sort of croupous inflammation, which runs its course within one week, without doing the slightest harm to the conjunctiva or cornea. And when the infusion is applied to granulated lids, the production of the jequirity ophthalmia that ensues is usually followed by the most marvelous improvement in the condition of the conjunctiva and cornea. The doctor summarized his experience in the following conclusions:

(1) Jequirity is the best known remedy for chronic granular conjunctivitis.

(2) It is the most efficient remedy for clearing a trachomatous pannus, and in inveterate forms of pannus it is preferable to the operation of pentotomy, as well as inoculation of blenorrhœal virus, because it works quicker than the operation, and is safer than the inoculation.

(3) It has no injurious effect upon the eyes, and can be used with perfect safety even where the cornea is ulcerated.

(4) It should not be used while the cornea and conjunctiva are actually inflamed.

(5) It does not benefit those cases of chronic conjunctivitis in which the symptoms of catarrh (succulence of the retrotarsal folds with increased secretion, etc.), predominate over those of trachoma.

(6 and lastly) The more violent the attack of the jequirity ophthalmia is, the quicker will be the cure of the granulated lids, and the speedier will the clearing of the cornea be produced.

DISCUSSION

Dr R. Tilley, said jequirity has been used all over the world for treatment of granular eyelids, and he thought, by adding a small quantity of hyd chl

cor to the infusion, that it would increase the efficacy of the remedy in curing this class of patients.

Dr B Bettman said the active principle of the bean is a crystalline substance, and an infusion of it is known to produce bacterial ophthalmia, i e, a bacillus is formed, or, I may say, a bacteria jequirity is produced on the conjunctiva, this, I think, overcomes the other variety of the inflammation, or, I may say, a vegetable ferment is produced—and the experiments thus far are not disproven. Dr J E Colburn stated if the bean is macerated in tepid water, for fifteen minutes, we will get the full effects of jequirity inflammation, if applied to granular lids. It will be produced in from twelve to fourteen hours, and in some cases in only 6 hours. He cited a case of pannus, where the patient had been almost entirely blind for three years, and by applying the infusion the patient at present was able to read newspaper type. The case was a gentleman, who had pannus this length of time, although it was not very dense. The dry bean, applied to the conjunctiva, does not produce so violent an inflammation. Dr Hotz, in closing, said he had nothing special to add, beyond that which he reported in the paper. He simply had presented clinical facts on the efficacy of the jequirity bean, which he now showed in the small phial, and of which all could see for themselves its size, form, etc.

L H M

SOCIETY TRANSACTIONS

TRANSACTIONS OF THE TEXAS STATE MEDICAL ASSOCIATION—FIFTEENTH ANNUAL SESSION HELD AT TYLER, TEXAS, APRIL 24, 25, 26 and 27, 1883.

This volume of 315 pages, 12mo, is full of interesting practical material, from a fair proportion of 282 members. The reports on progress in the different departments of medicine are full summaries of the practice of to-day. Dr Sam R Burroughs reports a case of malarial hæmaturia, where the renal capillaries responded promptly to the action of ergot, and where the intestinal mucous membrane took on a vicarious action, resulting in uncontrollable diarrhœa. Dr Wm F Starley reports four cases illustrating the use of chromic acid in uterine hæmorrhage. Dr J J Burroughs reports a case of removal of a living child from the uterus, by Cæsarean section, four minutes after the death of the mother. Dr J D Osborne reports a case of amputation below the knee to remove the effects of an ulcerated leg of forty-five years standing, which resulted in a fracture of diseased bone, and also a case of intussusception of the bowels with stercoraceous vomiting, in a boy five years of age, which was relieved by administering forty grains of tartaric acid dissolved in six ounces of water, and followed by the same quantity of bicarbonate of soda, as enemata. This was given twice, and the resulting formation of gas distended the bowels and caused fecal evacuations. Dr T H. Nott reports a case of tracheotomy for the removal of a grain of corn, which was cut in two by the incision made, and by acting as a valve pushed up with each expiration, and held in position by the swollen folds

of mucous membrane from behind it, necessitated a second incision low down in the trachea before it could be extracted. Dr Will B Davis reports six cases in detail, and refers to some eighteen more, of internal hæmorrhoids relieved by the subcutaneous injection of carbolic acid. He uses the chemically pure acid, and prefers it to the glycerole dilutions, as acting quicker and more effectually, and as passing through the needle more readily. Drs Beale and Adams report an interesting case of sponge grafting. Dr Arthur S Wolf reports two cases of hæmorrhoidal tumors of the urethra treated by the electro-cautery, and discusses the subject at some length. The details of six successful cases of ovariectomy are reported, one by Dr J J Burroughs, one by Dr S F Starley, and four by Dr T D Wooten. Dr J B C Renfro reports ten cases of uterine polypi. Dr M J Birdsny reports a curious case where absence of the uterus was diagnosed in a negro woman twenty-two years of age. The vagina was a closed pouch an inch deep, capable of expansion by pressure to two and a half inches. She was very amorous, and at her urgent request, an attempt was made to give her a vagina of sufficient depth and capacity. The operation resulted in pelvic cellulitis, with a profuse discharge of pus continuing up to the time of making the report, some two months after the operation. Dr Hillary Ryan reports a case of vesico-vaginal fistula which was successfully operated on. Drs Geo P Hall and R H Chilton give interesting practical reports, respectively, on the conditions of the eye as occasioned by diseases of remote organs as the uterus, and upon the cataract operation. There are other interesting papers in this volume which we have not referred to for want of space.

TRANSACTIONS OF THE MAINE MEDICAL ASSOCIATION, Vol. VIII, Part I, 1883, 8vo, 190 pp.—The address of Dr Geo E Brackett, as President, shows this Association to have been organized in 1853 by twenty seven physicians. The list of members show 240 names at present on the active list. Both the President and Dr M C Wedgwood in the annual address, dwell on the importance of supporting the Code of Ethics of the American Medical Association, and condemn all recognition of "pathies" and "isms" in medicine. Dr A K Meserve discusses Acute Inflammation of the Middle Ear. Dr E Eugene Holt discusses Diseases of the Mastoid. Dr J G Pierce considers the subject of Synovitis. Dr H N Small has a paper on Extra Uterine Pregnancy, and Dr A H Burbank has one on the Induction of Premature Labor. Dr S C Gordon gives the Results of Treatment of Injuries Occurring at Parturition.

Dr Stanley P Warren gives the description of a case of Rudimentary Uterus and Vagina, and a case of Cyst of Gartner's Canal. The latter is interesting, from its rarity, and from the recent references which have been made in medical literature to inflammations of this canal. The doctor gives also a short reference to Gartner. Dr Benjamin F Sturgis reports a case of Chronic Abscess of the Fibula. Dr J A Spalding gives a very instructive account,

with comments, of a malpractice suit in a case of injury to the eye.

Dr S C Gordon, in his report as delegate to the American Medical Association, speaking of the JOURNAL, considered that flattering encouragement was given to it, but hopes that arrangements may be made for more elaborate reports from the Sections where the most interesting discussions are held. An expenditure of a small sum, in his estimation, would furnish stenographers during the session. The biographical sketches which follow, refer to Drs William Warren Greene, J P Grant, Daniel Mountfort Tolford, Roland Curtis, Wm H Brown, Daniel F Ellis, Rotheus E Paine, Atwood Crosby, and William Sweat and an extended and very interesting sketch of that eccentric character, Dr Alexander Ramsay, who died some fifty years ago. Dr G P Bradley, Passed Assistant Surgeon U S N, who acts here as his biographer, seems to be provided with unusual facilities for the purpose through his uncle, Dr Bradley, of Fryeburg, who was a pupil of Ramsay and possesses the remains of his fine cabinet of preparations and other materials.

BOOK REVIEWS

ANNUAL REPORT OF THE SUPERVISING SURGEON-GENERAL OF THE MARINE HOSPITAL SERVICE OF THE UNITED STATES FOR THE FISCAL YEAR 1883. 8vo, 406 pp.

This report is filled with interesting matter. Surgeon General Hamilton sums up the amount of relief furnished to 40,195 patients, of whom 13,356 were treated in the hospitals, and 26,839 at the dispensaries. The receipts from all sources were \$426,620.35, and the expenditures \$469,966.21. The necessity for medical relief to the inhabitants of Alaska, and protection from the devastations of syphilis and small pox is strongly set forth. Reports upon the various hospital buildings and grounds are given at length, with diagrams showing their modes of construction. The question of national quarantines is discussed at some length. The activity and unceasing vigilance of the State Board of Health of Louisiana is referred to in so many words and "their co operation made comparatively easy work of what would otherwise have been a task of extreme difficulty." To obtain information from foreign ports, sanitary inspectors have been stationed at Havana and Vera Cruz to give notification of the approach of vessels from those ports at which yellow fever was prevailing and, in view of the threatened introduction of cholera into the United States by means of shipment of rugs, etc., from Egypt, by way of England, sanitary inspectors have been appointed at London and Liverpool, to furnish information of the departure of vessels liable to carry infected passengers or goods. The State Department has actively co-operated in this work and the consuls have furnished accurate and trustworthy reports from foreign stations. It is recommended that a treaty be negotiated whereby the continuance of commercial relations with Vera Cruz and Havana, as an instance would

depend upon the cleanliness and sanitary condition of the ports. This is meant to apply particularly to the Governments of Mexico and Spain, as controlling cities bordering on the Gulf, and to the Government of Brazil. The opinion is given that, under existing law, the duty of the Government ends with the maritime quarantine, and the question of local municipal sanitation may, with propriety, be left to the States.

Some eight tables of statistics of the exhibit of operations of the service, of relief districts, a summary of physical examinations of seamen, of diseases and injuries treated, and of causes of mortality, take up some 53 pages. The selected cases from hospital practice include Manifestations of syphilis among negroes, by Passed Assistant Surgeon, Henry R. Carter, in which the comparative absence of cutaneous eruptions and of mucous patches is marked, and the conclusion reached that syphilis pursues a mild course in the negro race, milder than in the white. Acting Assistant Surgeon A. C. Hamlin reports an interesting case of molluscum, and Acting Assistant Surgeon Geo. H. Stone reports three cases resembling yellow fever occurring at Savannah. Surgeon C. D. Fessenden and Assistant Surgeon C. T. Peckham report cases of popliteal aneurism—the first relieved by compression, the second by ligation of the femoral artery. Surgeon George Purviance reports a case of fracture of the frontal nasal, lachrymal, malar and superior maxillary bones. Surgeon James M. Gassaway reports a case, with illustrations, of fracture of base and vault of skull, resulting in abscess and hæmorrhage and terminating by recovery. Surgeon H. W. Austin gives a case of excision of the shoulder joint for caries, and one of excision of the head and two inches of the shaft of the humerus, followed later by excision of the entire scapula for caries.

He also reports a case of gunshot wound of the eye. Other cases follow, viz. Osteotomy for vicious union of fractured tibia, by Assistant Surgeon C. T. Peckham, loose cartilage in knee joint, by Assistant Surgeon D. A. Carmichael, contusion of perinæum with laceration of the urethra, Perineal section, by Surgeon Henry W. Sawtelle, abscess of the liver, relieved by aspiration, by Assistant Surgeon John A. Benson, and empyema relieved by aspiration, by Acting Assistant Surgeon Geo. H. Stone.

The reports of fatal cases with autopsies are very full, and include, among others, reference, in a case of apoplexy, to a pedunculated polycystic body, of an elongated and ovoid shape, about two inches in length, and free from any attachment, except to the choroid plexus in each lateral ventricle, lying loose on the floor, and connected with one end was a long stem (pedicle) which sprang from within a large capillary, given off from the choroid plexus. Microscopic examination determined the cysts to be echinococci. In another case of a man fifty years of age—no diagnosis, suffering from general dropsy, effusions into peritoneum and pleura, valvular disease of heart, only one kidney and ureter was found, the right kidney, which was one half longer than normal. A case of rupture of the heart is recorded where death occurred after symptoms of

pneumonia, with acute rheumatism and pericarditis. The heart was in a condition of fatty degeneration, and the rupture, twelve millimeters or more in length, was found in the left ventricle, on its anterior aspect, about twelve millimeters above the apex.

The yellow-fever epidemic of 1882 in the United States and a part of Mexico, is dealt with fully in an appendix made up of the reports of Surgeon Robt. D. Murray, Acting Assistant Surgeons Towsey, Burk, Finney, Fisher and White, and Drs. Lehman and Herron, accompanied by three maps, and giving also a report on the sanitary condition of Vera Cruz, by Assistant Surgeon John Guiteras. The protection afforded by the service, as detailed here, is referred to by O. M. Roberts, Governor of Texas, as a perfect success.

REPORT OF THE COMMISSIONER OF EDUCATION, FOR THE YEAR 1881. 8vo, cclxxvii, 840 pp.

This interesting and valuable report is poorly printed on inferior paper. It is for the most part statistical in its details, but contains a large amount of matter that is of interest to the profession. We note that there are two Schools of Medicine given for the education of the colored race. One, the Meharry Medical Department of Central Tennessee College, at Nashville, has eight instructors and thirty-five students, the other, the Medical Department of Howard University, at Washington, D. C., has ten instructors and eighty-one students. There are forty-eight scientific (so-called) schools in the United States, employing a corps of instructors amounting to 582 in number. Of the schools of medicine, dentistry and pharmacy, the statistics for 1881 read as follows:

Medical and Surgical—Number of schools, 76; of instructors, 1,213, of students, 19,250, of graduates at the commencement of 1881, 3,299. Volumes in library 40,757. Value of grounds, buildings and apparatus, \$2,208,470. Receipts for the last year from tuition and other fees, \$375,493.

Eclectic—Number of schools, 8, of instructors, 80, of students, 882, of graduates, 288. Library volumes, 2,216. Value of grounds, etc., \$230,500. Receipts \$39,760.

Homœopathic—Schools, 12, instructors, 173, students, 1,285, graduates, 442, library, 4,195. Value of grounds, etc., \$244,000. Receipts, \$39,244.

Dental—Schools, 16, instructors, 215, students 703, graduates, 285, library, 6,375. Value of grounds, etc., \$151,500. Receipts, \$84,338.

Pharmaceutical—Schools, 14, instructors, 65, students, 1,416, graduates, 377, library, 7,695. Value of grounds, etc., \$79,200. Receipts, \$30,830.

The summary of statistics of training schools for nurses gives as the number of schools, 17, instructors, 84, pupils, 414, graduates, in 1881, 133.

With these tables is given a running commentary, which is instructive and suggestive. Under the head of medical schools, preparatory courses, entrance examinations, undergraduate courses, character of medical instruction and the progress in medical education are all discussed. Education in foreign countries and abstracts of the official reports

of the school officers of States, Territories and cities, with statistical tables, for the bulk of the volume Table xxiv, as an example, gives all the educational and historical publications for 1881, embracing name of book and author, name of publisher, place of publication, size of book, number of pages and price Table xxv gives improvements in school furniture, apparatus, ventilation, etc., patented in the United States in the year 1881, the whole forming a valuable book of reference for the purposes for which it is intended

UNITED STATES CONSULAR REPORTS—REPORTS FROM THE CONSULS OF THE UNITED STATES ON THE COMMERCE, MANUFACTURES, ETC., OF THEIR CONSULAR DISTRICTS No 33 September, 1883 8vo pp 415-614

There is one report in this number which attracts medical attention, but it is rather curiously put It is headed "Yellow Fever Scientific Experiments Made at Rio Janeiro, Showing the Transmission of the Disease by Contagion," and is forwarded by Minister Andrews The report reads "on the 14th we took" etc., but throughout the report there is no key as to who "we" might be St Menezes Doria, Dr Domingos Freire, and Dr Arango Goes are all mentioned incidentally In substance, laboratory experiments are given, where some grammes of blood were taken from the heart of a person dying of yellow fever, in which blood the microscope revealed the presence of cryptococci, in different phases of full development One gramme of this blood was injected into the vein of a rabbit, which died in fifteen minutes with tetanic convulsions This rabbit's blood, one gramme, was similarly injected hypodermically in a Guinea-pig, which died at the end of some hours A gramme from the blood of the third subject was injected under the skin of another Guinea-pig It died within a little time, the blood of all these subjects showing an infinity of cryptococci, and post-mortem examination revealed the anatomico pathological lesions which usually characterize cases of yellow fever in man Dr Domingos Freire is quoted as having discovered and isolated an alkaloid, extracted from black vomit, in which it exists in the state of a salt, considering it a product of a secretion or excretion of the microbe It is a liquid, of an acid, aromatic smell, oily, forms an opalescent emulsion with water, and is soluble in alcohol and ether, giving out abundant ammoniacal vapors when heated with potash Dr Freire also ascertains, by direct experiment, by cultivating cryptococcus in gelatine within a globe, that the color of black vomit is not due to altered blood, but to the cryptococcus, and he was thus enabled to obtain an artificial black vomit The earth was taken from the grave of a man deceased the year before, which also produced artificial black vomit A Guinea-pig being shut up in a confined space with some of this earth, died in five days, and its blood, which was previously examined and found to be pure, was crammed with the cryptococcus, in various stages of evolution The urine was albuminous, and the brain and intestines were yellow with the peculiar pigment of the cryptococcus Dr Aranzo Goes is also mentioned as hav-

ing cultivated a fungus from the blood of the liver of a yellow fever patient upon a slice of bread, with which he succeeded in communicating yellow fever to various fowls, Guinea pigs, and a monkey, by inoculation, injections, and introduction into the stomach

FOREIGN CORRESPONDENCE

[For the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION]

LONDON, NOVEMBER, 1883

By the somewhat sudden death of Sir William Siemens, the scientific world loses one of its brightest luminaries He was by birth a German, and learned engineering at the factory of Count Stolberg, but in 1843 he came to England Since then, his fertile brain produced invention after invention, each fresh outcome of his inventive power having some practical bearing on the arts He received the degree of D.C.I. from Oxford University in 1869, was elected a Fellow of the Royal Society in 1862 His theory of the conservation of solar energy, published last year, won the attention of men of science all over the world

At the last meeting of the Pathological Society, Mr Sutton, in conjunction with Dr H Gibbs, read a paper on "Tuberculosis in Birds" He said his attention was first attracted to the disease by a farmer in the north of Middlesex, in the spring of 1879, who complained that his stock of poultry was in a fair way of becoming annihilated Ducks and geese were not affected After spending more than two years in investigating the matter, and examining from all sources more than 1,000 birds of various species, he discovered invariably, in the diseased organs, a bacillus undistinguishable from that believed by Koch to be distinctive of tuberculosis, and that although in grosser anatomical features, the lesions differ from those of human tuberculosis, yet, histologically, the resemblance is close Evidence was also obtained of the transmission of the disease to animals fed on the tuberculous tissues of the bird It is the intention of the Society to initiate a debate upon tubercle, especially with regard to its infective qualities

A young girl died the other day from eating rather freely some preserved salmon from a tin, a brother who had also partaken of the fish was taken ill after having taken it The medical evidence showed that death had been caused by the salmon having become poisoned through the tin of the case having dissolved off the iron, and the salmon becoming decomposed by the nitrate of tin that was formed

An interesting case of successful Cæsarean section in a dwarf has taken place in a provincial town The patient, a woman aged 48, only four feet in height, ceased growing at the age of eight years The antero posterior diameter of the pelvis was only three-fourths of an inch The operation was performed in a small room of a cottage situated in a narrow court, there being barely standing place for four medical men in the apartment The weather was so sultry that the window had to be kept open There were four children down with measles in the

only available room for the use of the family—eight in number—the narrow, unlighted stairs communicating with the dwarf's room above. The operation was performed without antiseptic precautions, no chloroform was used, the neighborhood of the linea alba being rendered insensitve by means of the ether-spray. The wound was closed by silver sutures, and the patient kept under the influence of opium. For the first few days the symptoms were bad, and although the only nursing received was from a neighbor, who ran in at intervals, within a month the woman was quite well and able to go out. The fœtus weighed seven pounds, and had been dead about seven days. Taking into consideration all the surroundings, the case may be looked upon as unique.

A case is reported of a cowman becoming inoculated in the mouth with virus from a cow suffering from foot and mouth disease. His mouth has been one mass of sores, which apparently attacked the whole of the intestinal mucous tract, and ulcers were appearing on the legs and feet. This is the first well authenticated case occurring in England of the poison being conveyed from the animal to a human being in so marked a form.

The proposal to establish a Marine Zoological Station is still being energetically carried on, and it is suggested that some of the surplus funds of the British Fisheries Exhibition should be available for its foundation. Professor Ray Lankester has pointed out that England stands almost alone among the European States in not having a well equipped marine zoological laboratory. It is to be hoped, as more than one good site has been offered, that such an institution may soon become a "*fact accompli*."

A Preparatory School of Medicine has, this autumn, been established at the West London Hospital, at Hammersmith. One of its chief objects is to give intending medical students an early insight into their proposed profession, so they may be able to determine, without needless loss of time or money, if the practice and science of medicine and surgery is compatible with their aspirations. G O M

NECROLOGY

HAWLEY, GEORGE BENJAMIN, M D, was born in Bridgeport, Conn, Feb 13th, 1812, died at Hartford, Conn, April 18th, 1883.

Dr Hawley's parents removed to Watertown, Conn, while the subject of this sketch was very young, and there he passed his boyhood days, attending the schools in the neighborhood, and acquiring the strength and vigor of body which sustained him in the arduous labors of after life. He afterwards attended a school in Goshen, Conn, where he was prepared for Yale College, which he entered in 1829, graduating in the class of 1833. He immediately commenced the study of medicine with Dr Pierson, of Windsor, Conn. He attended the lectures at the Medical Department of Yale College in 1833-34 and 1835.

Receiving his degree, he commenced practice at Charlton, Mass, remaining, however, but a short time, having received and accepted an invitation

from Dr Silas Fuller, the Superintendent of the Retreat for the Insane, at Hartford Conn, to become his assistant. Four years after he married Dr Fuller's daughter, Zerviah C, who died in 1847, leaving one son, George F Hawley, M D, who is now in practice in Hartford.

In 1848 Dr Hawley was again married to Miss Sarah C Boardman, who is still living.

Dr Hawley was a man of very marked character. His perceptive faculties were exceedingly prominent. His judgments were rapid, but usually correct. He seemed to comprehend a case of disease at a glance almost by intuition. He was the possessor of exhaustless physical power. These faculties enabled him to perform a vast amount of labor in a given time. His perseverance was unlimited, and difficulties and obstacles only stimulated him to greater effort.

Like General Grant, he did not seem to know when he was beaten, and often won a victory out of an apparent defeat. With such a temperament his treatment of disease would naturally be "heroic." He believed in medicine, and in its power to cure, and he attacked disease with all the ardor of his nature.

In 1854, Dr Hawley became interested in the Hartford Hospital, and it is largely due to him that this charity is to-day established on so firm a foundation. From its beginning till his death this institution occupied a large share of his time and thoughts, and his last work, while confined to his room was a revision of the rules for its government.

A few years since he conceived the idea of erecting a home for aged and infirm people in indigent circumstances.

He immediately set himself to the task, with all his usual earnestness. He was not spared to see the completion of his work, but he accomplished much, and never lost faith to the last in the success of his undertaking.

A man of Dr Hawley's character could not but incur the enmity of some, but those who knew him the most thoroughly never questioned his honesty, integrity, and true benevolence.

CHARLES H PINNEY, M D, of Conn

HERSON, NAHUM ALVAH, M D, of Portland, Me, was born in Lebanon, in that State, August 7 1835, and died in Dublin, Ireland, May 1, 1881. His early life was spent in active labor upon his father's farm. Fond of study, the limited duration of the district school was supplemented by attendance upon the schools of adjoining districts. In August, 1852, he began attendance at Parsonsfield Academy, and later at the academy at West Lebanon. Working upon the farm summers, teaching very successfully winters, attending the academy spring and fall he fitted for college. That he was not able to take a college course was to him a keen regret, which never lessened. He first studied medicine with Dr John S Parker, of Lebanon, and later with Dr David L Parker, Farmington, N H. Attended his first course of lectures at Brunswick, Me. the second at the University of Pennsylvania, at Philadelphia, where he graduated March, 1861. Settling in Sanford Me,

he was well established in practice, when he entered the army as Assistant Surgeon 20th Regiment Maine Volunteers, August, 1862. In December, 1862, he was taken prisoner at Fredericksburg, Va., but was soon released. In March, 1863, he was promoted to be full Surgeon 17th Regiment Maine Volunteers, where he remained till April, 1864, when he was given the charge of the field hospital of the Third Division Second Army Corps. As Dr. Hersom was the youngest surgeon in the division, the appointment was a great surprise to himself. He was selected for the responsible position on account of his recognized ability and character.

How faithfully and well he performed his duties while in the army, the love and esteem in which he was always held by officers and men best testify. His life there, as always, was that of the ideal man—pure, noble, manly, Christian.

In August, 1865, Dr. Hersom settled in Farmington, N. H. and the November following married Jennie Lord, daughter of Samuel Lord, of Spring Vale, Me. At the end of two years, his health being greatly undermined by his army life and an extensive and laborious country practice, he was obliged to give up business, and the next five years were spent in efforts to regain his health. He was not able to resume active practice till the fall of 1872, when he came to Portland. From this time he devoted himself unremittingly to his profession, in which he was very happy and in which he was eminently successful, becoming notwithstanding his long loss of time and a constitution permanently impaired, a leading practitioner in the State. Feeling much worn by the labors of a very extensive practice, Dr. Hersom left Portland April 11, 1881, for a few months stay abroad, landing at Queenstown, April 22, while on the way to Dublin, May 23, he was attacked by peritonitis which ended fatally—1, 1881. He received the best medical attendance of Dublin, and unremitting care and attention from Dr. E. E. Holt, of this city, who accompanied him, assisted by Dr. D. Webster, of New York, but without avail. He realized his condition, leaving messages for his wife and little girl, and expressed willingness to go. Dr. Hersom's religious faith was deep and earnest, shown more by his life than by professions. He was a member of State Street Church. He possessed rare qualifications for a physician, keen diagnosis, with an almost intuitive grasp of the right remedy. His was no routine practice, each case was a separate study. He never put his own ease or interest before that of a patient. Very unassuming, sympathetic and sincere, his patients became his firm friends to an unusual degree. His loyalty to friends was a marked trait. He could forgive and forget an injury, but he never forgot a friend or favor. While his many rare qualities only make his loss the greater, his friends have a precious legacy in the memory of his life. Dr. Hersom was a member of the city, county and State Medical Societies, and the American Medical Association, which he joined in 1880. E. E. HOLT, M.D.

MISCELLANEOUS

LIST OF CHANCES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING DECEMBER 8, 1883

Medical Inspector D. Kindleberger ordered to the U. S. S. Hartford Pacific Station per steamer of the 10th inst.

Medical Director A. L. Gihon detached from duty as member of Board of Inspection and Survey on the 15th inst. and placed on waiting orders.

Medical Director George Pack ordered to report on the 15th inst. as member of the Board of Inspection and Survey.

OFFICIAL LIST OF CHANCES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U. S. ARMY FROM NOVEMBER 30 1883 TO DECEMBER 7 1883

Carter W. F. Captain and Assistant Surgeon relieved from duty at Washington Barracks D. C. to take effect at the expiration of his present leave of absence and assigned to duty at Little Rock Barracks Arkansas (Par 4 S. O. 224 Department of the East Nov. 30 1883).

Brown, Paul R. Captain and Assistant Surgeon assigned to duty in the Department of Arizona (Par 4 S. O. 273 A. G. O. Nov. 28 1883).

Richard Charles First Lieutenant and Assistant Surgeon assigned to duty at Jackson Barracks New Orleans La. (Par 2 S. O. 224 Department of the East Nov. 30 1883).

Shufeldt R. W. Captain and Assistant Surgeon now on sick leave relieved from duty at Jackson Barracks New Orleans La. (Par 3 S. O. 224 Department of the East, Nov. 30 1883).

NEW BOOKS

Beal, L. S. One Hundred Urinary Deposits. Second edition. Plates 55. Churchill, London.

Bradshaw B. Dictionary of Mineral Waters Climatic Health Resorts Sea Baths and Hydropathic Establishments. Second edition. 25 6d. Trübner London.

Hill B. The Essentials of Bandaging With Directions for Managing Fractures and Dislocations. Fifth edition. 5s. Lewis London.

Hospital Management. Being the authorized report of a conference on the administration of hospitals held under the auspices and management of the Social Science Association on the 3d and 4th of July 1883. 25 6d. Paul London.

Husband H. A. Sanitary Law. A Digest of the Sanitary Acts of England and Scotland. 35 6d. Simpkin London.

Musket W. Boyd. Cholera. Its Etiology Contagiousness and Treatment. 2s. Churchill London.

Raffe C. H. Clinical Chemistry. An Account of the Analysis of Blood Urine Morbid Products etc. Sixteen engravings. 5s. Cassell London.

Semple C. E. A. Children's Diseases. Their History and Treatment. 7s. 6d. Baillière London.

Stagg C. Sanitary Work in the Smaller Towns and in Villages. Second edition. 3s. Lockwood London.

Treves F. Surgical Applied Anatomy. Sixty one engravings. 7s. 6d. Cassell London.

Wise A. T. Tucker. Wiesen as an Alpine Resort in Early Phthisis. With instructions on clothing diet and exercise in the Swiss Alps during winter. 3s. 6d. Baillière London.

Woodhead G. S. Practical Pathology. One hundred and thirty six colored plates. 24s. Simpkin London.

Brown D. B. Surgical Experiences in the Zulu and Transvaal Wars 1879 and 1881. 8vo. 6s. Simpkin London.

Carter A. H. Elements of Practical Medicine. Second edition. 9s. Lewis London.

James Prosser. Vichy and its Therapeutical Resources. Fifth edition. 2s. 6d. Baillière London.

Kirk J. Papers on Health. 8 vols. 12mo. 7s. each. Hamilton London.

Milton J. S. The Hygiene of the Skin. Second edition. 1s. Chatto London.

Snow H. S. Clinical Notes on Cancer. Its Etiology and Treatment With Special Reference to the Hereditary Fallacy and to the Neutrotic Origin of Most Cases of Alveolar Carcinoma. 3s. 6d. Churchill London.

Strange W. The Seven Sources of Health. A Manual of Personal Hygiene. 2s. 6d. Renshaw, London.

Watts H. A. Manual of Chemistry. Vol. I. Physical and Inorganic Chemistry. 9s. Churchill London.

Buckham T. R. Insanity Considered in Its Medico Legal Relations. 2s. 6d. Lippincott & Co.

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ORIGINAL ARTICLES

IMMEDIATE PERINEORRHAPHY TWO FORMS OF RUPTURE, THE SPECIAL TREATMENT OF EACH, CERTAIN DETAILS IMPORTANT TO SUCCESS

BY E. C. DUDLEY, M.D. PROFESSOR OF DISEASES OF WOMEN CHICAGO MEDICAL COLLEGE

[Read before the Obstetric Section of the American Medical Association June, 1883.]

During the past few years I have examined such gynecological cases as came under my observation for evidence of previous perineal rupture, and have specially observed, in those cases in which the immediate suture had been applied, whether the union had been such as to give the patient a solid, normal, triangular perineal body, capable of fulfilling all its functions. These observations were undertaken not for the purpose of publication, but as the basis for an individual judgment, and this is my excuse for the absence of accurately recorded statistics, but the conclusions which have forced themselves upon me are so adverse to what had been anticipated, and seem so important, that I venture to place them before you, as follows:

Upon ocular examination of the cutaneous side of the perineal triangle, this was, in the majority of cases, found united, but one index finger in the rectum and the other in the vagina showed an almost constant failure of union in the deeper muscular and connective tissues of the organ, with the resulting tendency to descent of the uterus by traction from the prolapsing anterior and posterior vaginal walls. It may be that the difference of opinion among the profession on the value of the primary operation of perineorrhaphy partly arises from the failure of many to examine with reference to the presence or absence of union in the deeper portions of the perineal body, and it would indeed seem that an important advance will be made when the whole profession comes to the practical appreciation and application of a certain truth, which with many appears to have little more than theoretical recognition. It is this: the cutaneous and subcutaneous structures constitute relatively the least important part of the organ, and that when rupture occurs, union of these structures, *i. e.*, the production of the so called thin perineum, is of little consequence, because the deeper and more important structures have failed to unite. Assuming that the cases which I have examined may fairly be considered

as representatives of their class, it follows that the immediate suture, as ordinarily applied, often at least, fails to fulfill its indication, and that it must either be made more efficient, or we must postpone all operative procedure until after convalescence, and then rely on the secondary operation. But, in such postponement, we fail to meet what many would regard the most vital and immediate indication for perineorrhaphy, *i. e.*, danger of sepsis by absorption through the torn surfaces, which, from their location and surrounding conditions, are peculiarly favorable to the development of wound disease.

But if the sutures fail to produce complete union of the torn surfaces, it is evident that they also fail to protect against sepsis. Indeed, they rather favor its development by producing additional irritation, and thus acting as a cause of wound disease. Moreover, the union of the cutaneous surfaces by closing the superficial part of the perineum only, forms a pouch of the deeper torn surfaces, where the discharges may accumulate, and through which they may be readily absorbed. To prevent this, various faults in the primary operation should be avoided, and among them, the most important are certain defective methods of passing the sutures. I have myself seen the operation performed a number of times when only superficial sutures were used. Evidently such a procedure would not only be liable to fail of full union, but would also favor the formation of the already mentioned pouch, where the discharges from the uterus could accumulate and become septic. But it is possible that an equally effective source of error is in the failure to distinguish between the different varieties of rupture, and therefore to give to each case its proper method of suture.

The commonly accepted form of perineal rupture causes the perineal body to be separated into two parts, the one retracting to one side and the other to the opposite side of the vaginal outlet. In this form of rupture, we have two plane, raw surfaces of triangular shape to be approximated. The method of operation is almost self-evident. It requires the sutures to be passed transversely from one side of the raw surfaces to the opposite side, commencing at the vaginal extremity of the rent, and continuing them one after the other, at intervals of about one-fourth inch throughout its whole extent, the first suture being nearest to the anus. When the operation is complete, about one-half of the sutures have their points of exit in the vaginal, and the others on the cutaneous side. It is

vaginal sutures, that union in the deeper perineal structures is so often wanting. Sometimes the attempt is made to draw the vaginal portion of the rent together by a single suture, having its points of entrance and exit at the posterior commissure of the restored vulva, and passing around the vaginal portion of the rent, so as to pull its inner extremity forward and either draw the margins on either side into a pucker or cause them to gape. The following schematic drawings will illustrate.

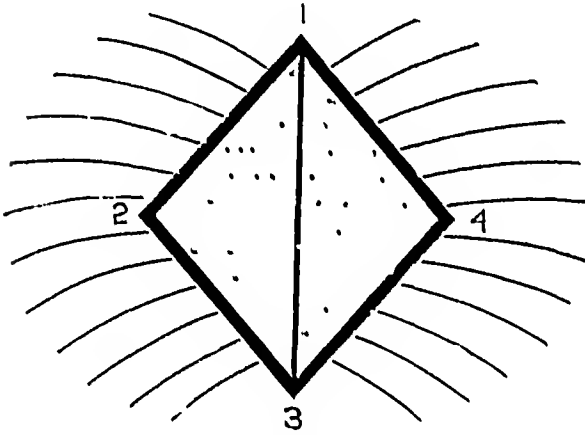


FIG. 1

Figure 1 shows the two lateral triangular torn surfaces, with the sutures introduced in such manner that, when tightened, the surfaces 1, 2, 3 shall be in contact with the surface 1, 4, 3. All sutures above points 2 and 4 are in the vaginal portion and those below 2 and 4 are in the cutaneous portion of the perineum. On account of the difficulty of removing the vaginal sutures, silk or catgut might be substituted for silver in this part of the wound.

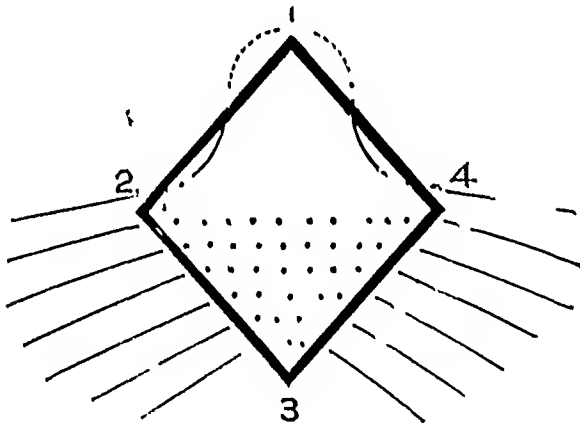


FIG. 2

Figure 2 shows the sutures introduced on the cutaneous side, and a suture 1, 2, 4 on the vaginal side. In place of the proper vaginal sutures as shown in Figure 1. It is evident that, after approximating the torn surfaces on the cutaneous side by tightening the cutaneous sutures, the vaginal suture 1, 2, 4, which properly belongs in the secondary operation, would in the primary operation for this form of rupture, only serve to prevent proper union of the vaginal margins of the wound by causing them to pucker or to gape.

Obviously, the last named suture, although indispensable in the secondary operation, meets no indication in this form of rupture, but, by its action of corrugating the margins of the vaginal portion of the

wound, tends rather to distort than to restore the perineum.

But there is another form of perineal rupture, not mentioned in the standard text-books, and, so far as I am aware, hitherto undescribed, in which the operation just mentioned (see figure 1) is not only impossible, but its attempt must necessarily be followed by failure of deep union. It is a form in which the tissues are separated in three directions instead of two. Text-books on midwifery mention as an accident of great rarity the so-called central rupture, in which the child, instead of passing through the vulva, tears its way through the perineal body, and passes out by an opening somewhere between the posterior commissure of the vulva and the anus.

I would now ask your attention to one of the special points of this communication, which is that, although complete central rupture of the perineum is a rare accident, incomplete central rupture is not so rare. Indeed, there is reason to suppose that in a large proportion of cases, the rent commences as a central rupture, but instead of going on to complete perforation of the perineal body, the tissues in front give way and retract to either side, by a rupture extending through the posterior commissure back toward the anus. Now, if the commencing central rupture be also in the antero-posterior direction, then the whole rupture is of the simple form already described, but if the central portion of the rupture be transverse instead of antero-posterior, and extend from side to side of the perineum, whether in a straight, curved or broken line, then all the perineal structures beyond it must be retracted toward the inner extremity of the vagina, and the closure of the perineum thus ruptured must necessitate the approximation of tissue from three directions. The following figure will illustrate.

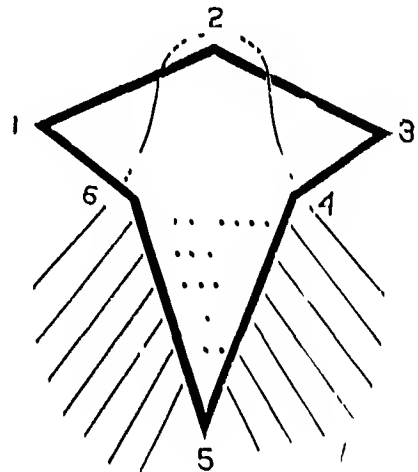


FIG. 3

Figure 3 represents the transverse central rupture. The surfaces included within 6, 1, 2, 3, 4, are on the vaginal, and most of those between 6, 5, 4, are on the cutaneous portion. The sutures in the cutaneous portion are intended to approximate the tissues from side to side. The suture 6, 2, 4, when tightened, should draw into apposition the two margins of the transverse vaginal portion of the rent. The lines of union would then be in the shape of the letter 1, its cross piece in the vaginal, and its shaft in the median line, and mostly in the cutaneous portion of the perineum.

In addition to the vaginal suture 6 2 4, it is important to pass on either side of it three or four sutures to approximate more securely the transverse part of the rupture. These, having their points of entrance and exit in the vagina, would be difficult to remove until two or three weeks after operation and should, therefore be of catgut or carbolyzed silk instead of silver wire.

Uniform success further depends upon attention to certain details, which are here mentioned, with no claim to originality, but for the purpose of urging their importance. All shreds should be detached by scissors before closure, as they may, by sloughing, prevent union. If the lacerated surfaces have been much bruised or ground by the pressure of the child, they may, to advantage, be pared here and there, where the contusions seem greatest, but this will be required very little in the majority of cases. Silver wire has been demonstrated by experience to have great advantage over silk or catgut. It cannot, like the two latter, absorb moisture, and thus become septic and favor suppuration. Number twenty-six is a size well adapted to perineorrhaphy. The sutures should be deeply buried under the torn surfaces, and, if possible, should be visible nowhere between the points of entrance and exit. Suppuration along their track is much more probable if this caution be disregarded. Place the sutures about one fourth inch apart, but care should be taken to twist them tightly enough only to bring the opposing surfaces into contact. The subsequent swelling will create sufficient tension. While the sutures are being secured, it is well to have the patient on a bed-pan, and the surfaces constantly irrigated with water from the fountain syringe, for the purpose of washing away all blood adhering to the wound. Solutions of carbolic acid over one per cent are said to prevent union. Twisting the wires, as described by Emmett, has seemed to the writer much better than shooting them. The quill suture is clearly impossible where a part of them must have their points of entrance and exit inside the vagina. Occasionally superficial sutures will be needed, but they should include only the extreme margins of the mucous membrane or skin, their object being simply and only to bring these structures in apposition, so that when the operation is complete, no torn or denuded surface shall be visible, either on the cutaneous or mucous surfaces. Careful attention to these details will, in nearly every case, be followed by satisfactory union by first intention, the exceptions being, in general, those cases in which, from long continued pressure of the child on the perinæum, that organ had become so bruised as to make it incapable of union.

Upon examinations of a number of results thus obtained, several months after the patients had been discharged, the perinæum was found, in each case, to be of normal shape, i. e., solid and triangular, but its volume was often so far below the normal standard that it was incapable of fulfilling perfectly its functions, and there was observed a resulting tendency to cystocele and the consequent uterine displacement from traction produced by the falling of the vaginal walls. This defect in volume may depend upon any one or all of a number of causes.

1 Possibly the restored perinæum may, in a limited number of cases, undergo superinvolution. 2 Evi-

dently the new tissue, of which the line of union is formed, would tend to contract, and with it the perinæum also. Besides, the perinæum is held somewhat compressed during the healing process by the sutures, and this new first intention tissue would tend to tie the organ, as it were, into its compressed shape. 3 Probably, also, in many cases, union in the superficial part of the wound, which is more exposed to the discharges, may, to some extent, be defective. Certain it is, whatever be the cause, that, in my former experience, after involution, the restored perinæum was generally too small.

To obviate this difficulty I have, in a number of cases, recently resorted to a very simple procedure which has uniformly been followed by satisfactory results. The device simply consists of denuding a strip about three-sixteenths of an inch wide all round the torn surfaces. This strip should be a little wider in the vaginal portion of the wound than in the external cutaneous portion. It has the effect of increasing the extent of the surfaces to be united by as much as the width of the denuded strip. In consequence of the early and firm union which takes place between these smoothly denuded surfaces, the weaker union beneath is protected from the injurious influence of the discharges. Clearly, this procedure is essential to a perfect result in multiparæ, whose perinæa have suffered slight lacerations in previous labors. My own experience with it has been so satisfactory that I should not omit it in any case.

NOTE.—Since reading this paper, a remarkable and original communication has been presented by Dr. T. Addis Emmett to the American Gynecological Society, in which he took the ground that in all ruptures of the perinæum a successful result depends upon an operation which draws the crest of the posterior vaginal wall forward against the perinæum. It is clear that this must be true in all cases of transverse rupture, and if the transverse form of rupture should prove on further investigation to be a common form, then a most apparent reason would be furnished for the position taken by Dr. Emmett. I am unable to make a definite statement with reference to the frequency of the transverse rupture, but may say, at least that it can hardly be very rare since I have during the past few months personally observed five cases of which three were torn transversely. It may prove to be the more common form of the two.

DISCUSSION

Dr. W. H. Wathen, of Louisville, said: All leading obstetricians now practice and recommend the immediate union of the lacerated perinæum after the most improved methods of operating, but that Dr. Dudley's practice of further denudation of the vaginal surfaces of the torn edges is generally unnecessary, and complicates the operation, so that the general practitioner, who does most of the obstetric practice, would not perform it. It is true, that by his method, we may get a thicker perineal body, but if the sutures be properly introduced, with no additional denudation, and the after treatment carefully attended to, the united edges will form a perinæum of normal dimensions, and the operation can be performed with no assistants, without an anæsthetic, and nothing is needed but a needle, and silver or silk sutures. Instead of complicating this operation, we should attempt to reduce it to such simplicity that any physician will feel equal to the task of repairing a recently ruptured perinæum, thereby preventing immediate or subsequent disagreeable results. All physicians should examine the perinæum in every labor, and where there is extensive laceration, partial

or complete, should operate at once. Deep lacerations of the perinæum, if not united, will result in subinvolution of the vagina, uterus and its appendages, and is often followed by prolapsus of the uterus and vagina, with cystocele or proctocele. This is especially apt to occur in the laboring classes, and is difficult to relieve, and sometimes cannot be cured.

TINNITUS AURIUM AND VERTIGO AS PROMINENT SYMPTOMS OF LITHÆMIA

BY GEORGE H. LYMAN, M.D.

[Read before the Section for Clinical Medicine, Pathology and Hygiene of the Suffolk District Medical Society November 14 1883.]

There is, perhaps, no class of patients coming under a physician's observation, which are more troublesome than those cases of gastric and hepatic derangement due to the lithic acid diathesis, so called. The functional disturbances are so associated with nervous phenomena, as to render the sufferer impatient and intractable, skeptical of your assertion that he has no serious organic disease, and ready to try every nostrum and accept every diagnosis but the true one from the numerous professional and lay friends whose sympathy he seeks.

Although lithæmia, lithuria, lithiasis, etc., have now become tolerably familiar terms to the profession, the whole subject still remains more or less obscure, especially the subjective semiology and the relative importance of the renal and hepatic pathology. The true nature of the affection often escapes recognition by the medical adviser until some case presents itself which cannot be ignored, when he is forced to closer inquiry into the antecedents and a more rigid analysis of the symptoms. He then discovers that he has to deal with something more than a mere gastric derangement, indigestion, dyspepsia, or what not, vague terms with which he has temporarily satisfied his own conscience and his patient's importunities, his blue pill and pepsin, his alkalies and sedatives, either separately or in some incongruous combination, have generally been a lamentable failure. In mild cases, to be sure, the mark is occasionally hit by some snap shot, but when the patient, superadded to his other grievances, has an incessant tinnitus, he loses faith in the stomach doctrine, or if his memory begins to suffer, or he has occasional attacks of vertigo, so sudden and severe as to make him unwilling to trust himself alone in the street, what wonder that he should seek other and special skill in brain, heart, eye or ear, to the great discredit of the general practitioner, for though he may get no more relief by the change, his subjective symptoms get more direct attention, and he, at any rate, is for the time being satisfied that merely local treatment is exactly what he needs.

While the first of the following cases was under observation, the admirable article of Dr. DaCosta appeared in the October number of the *American Journal of Medical Sciences* for 1881, in which these nervous phenomena especially are brought more prominently forward than in the famous Croonian Lectures of Dr. Murchison, which have done so much,

by stimulating inquiry, to develop our knowledge of these lithæmic conditions. Although I cannot hope to add anything to the value of Dr. DaCosta's paper, possibly some allusion to a series of my own cases may be of interest to others.

The disorder in question has no fixed set of symptoms. The subjective expression of the pathological condition may manifest itself in protean forms. Either the gastric, rheumatic, renal, hepatic, cerebral, or cardiac, or several of them combined, may seem to predominate in any particular case, yet each is dependent in great measure upon certain lithuric conditions, which, being neglected, render any treatment unsatisfactory, if not wholly useless. There is necessarily neither nausea, constipation nor diarrhœa, headache, insomnia, or palpitations, myalgic pains, or urinary deposits, all in any given case. The subject of it, indeed, is quite likely to express himself as being otherwise in good health and strength, vigorous in mind and body and yet so tormented at times, and apparently without cause, with one or more of the functional nervous phenomena described, as to induce in him the fear of some fatal organic defect of heart or brain.

Of the varied symptoms none are more distressing than the two which are the more immediate subject of this paper. A constant tinnitus aurium from which there is no escape during the waking hours, and which indeed often interferes with the sleep—buzzing, ringing, clicking or constant pulsation, for which no visible or tangible cause can be discovered either in gastric disorder or the external and internal auditory apparatus—is not only a constant source of annoyance but of serious apprehension to its unfortunate possessor, or still more if, either with or without this tinnitus, the victim finds himself the subject of sudden attacks of vertigo, so severe and decided as to cause a staggering gait, possibly complete prostration, as in an attack of epilepsy, the case assumes a gravity which startles and terrifies its subject into fear of impending death.

In one case a young, active business man, apparently in vigorous health, in addition to some of these symptoms, finds his memory failing to such a degree as to impair business efficiency, he can not recall the prices of his goods, the daily changes in stocks, etc., and fancies that he is threatened with paralysis, brain softening, or some dire evil which is to bring ruin upon him.

Another will have renal complications dependent wholly upon some hepatic derangement of function which sends him from one physician to another in the hope of relief to his fear of Bright's disease, diabetes, or cystic calculus, while still another may be complicated solely with tormenting muscular or arthritic pains. And so on one might recall instances of one more of these with the addition of purely nervous complications, simulating to the fears of the patient almost every conceivable organic disease.

The first of the ensuing cases only is given in some detail, it being a striking instance of the disorder, and one which, with its coincident organic cardiac complication, might well have caused much concern to both physician and patient, but which, when its true na-

ture was appreciated, proved to be susceptible of prompt and effectual relief

Dr —, who had been in active practice for twenty-five years, about 1871 was attacked suddenly, after a moderate lunch, with vertigo so decided as to necessitate the recumbent posture, and cause great alarm to his family. There was no actual syncope, but a distressing sense of faintness, from which, however, he recovered in a few minutes, there was neither nausea, palpitation, nor headache. The attack was at the time attributed to lager beer, not very fresh, taken with the lunch. In early life, while a medical student, he had suffered from a bad attack of endocarditis, entailing mitral disease, during the course of a severe rheumatic fever. Three or four years later he had a second rheumatic seizure, very severe, and lasting, with little intermission, for six weeks, but without any additional cardiac complication. Since these attacks, any unusual exertion has inevitably induced palpitations and dyspnoea, but with the precautions which his professional knowledge indicated, these attacks were infrequent, giving but little trouble and no apprehension. At about the period of the first vertiginous seizure he began to be troubled with tinnitus, but at rare intervals, and coincident with catarrhal attacks, nasal and faucial. For a time this attracted little attention, but subsequently became more frequent and annoying, until, at the end of some years, the tinnitus became almost constant through the day, and at night was frequently so annoying as seriously to interfere with sleep. Consulting his friends specially skilled in aural affections, it was by all agreed that the cause must be attributed to an extension of the catarrhal congestion to the middle ear, with fibroid thickening of the canal, and that, in view of its long duration, little encouragement could be given for its permanent relief. The verdict was, perforce, accepted, and for years the continued singing was endured, with such philosophy as could be mustered, though occasionally the pulsations would become so aggravated as to be almost unendurable. From 1871 to 1879 occasional attacks of vertigo occurred, but generally late in the evening, and after days of unusual fatigue. These were always temporarily relieved by a dram or two of any mild stimulant. The attacks were at one time thought to be possibly due to his habit of smoking, but no direct relation could ever be traced. In 1879, when leaving the water-closet one morning, a sudden and severe attack occurred, with distressing faintness and prostration, though the pulse was of good strength, and there was no palpitation. Some time elapsed before he was able to leave the floor for a couch, and subsequently to resume his daily work, in the pursuit of which he now, for the first time, noticed that his gait was uncertain. For the ensuing two years there were no more, or only very slight, attacks of vertigo, but the sense of inability to walk straight was more or less manifest, and at times to so great a degree as to make him fear the charge of intoxication. The staggering could only be overcome by stopping, sitting down, or grasping the first tree or fence for a few minutes.

Finally, in October, 1881, when apparently per-

fectly well, there being neither gastric nor cardiac symptoms, a very sudden and severe attack of vertigo occurred while walking through a hospital ward, and a chair at hand alone prevented his falling. The faintness was relieved by a swallow of brandy, and the visit finished without difficulty.

Matters had now assumed so grave an aspect that he began seriously to study his own case, as he would have been compelled to do in the case of any other patient. First, the condition of the heart was investigated as a possible cause, but competent examination revealed no increase of the old mitral disease, no evidence of fatty degeneration, the pulse in fullness, frequency, and rhythm normal, neither palpitations nor dyspnoea. No evidence whatever of any organic cerebral disorder. The renal function was apparently perfect, the urine of proper specific gravity, and normal in quantity, although there was a tendency to abnormal acidity. In the absence of any deposit or other symptoms the urine was only roughly tested at any time, unfortunately no accurate analysis was ever made. The digestion was vigorous, the bowels, as always during life, regular, with exceptions noted hereafter. I should now state that since the two rheumatic seizures in early life, above mentioned, he has been subject to frequent attacks of pain and swelling in the small joints of the hands and toes, more especially the former, and also to myalgia in shoulders, loins and hips. These have never been accompanied by fever nor by any severe disturbance of the general health, but always by extreme irritability, nervousness and impatience, with more or less torpor of the bowels. The appetite, even in the worst of these, was always good, too good. These attacks were usually directly traceable to indulgence in certain articles of food or drink, and never found susceptible of mitigation by drugs of any kind until these special things were omitted for a time. Half a bottle of claret or burgundy, for instance, would almost certainly induce redness, swelling and pain in the knuckles, sometimes on a single trial, more often at the end of a few days, strawberries always, and most other fruits if eaten after meridian, malt liquors of any kind if used continuously, while, on the other hand, the moderate long-continued use of brandy, whiskey, thin, dry sherry, or dry champagne agreed perfectly if taken in moderation with dinner.

The sharp gouty pains and enlargement and redness of the smaller joints, in connection with the nervous irritability, suggested of course, the lithic acid diathesis, and careful continued observation proved a direct connection between the exacerbations and increased tinnitus and vertigo.

A more careful course of diet was at once instituted. The amount of nitrogenous and carbonaceous food was greatly reduced, and all stimulants, and malt liquors, always in daily, but never in excessive, use were discarded entirely. As medicines, a full dose of citrate of lithia was given before each meal, and an active dose of bitter water on rising each morning, the latter producing one *full* liquid evacuation daily. The effect of this course was very decided. It was continued with hardly an intermission for four months, though on several occasions, when too much animal

food or a glass or two of claret, sherry, or madeira were indulged in, the warnings were unmistakable. At the end of this period the tinnitus was hardly noticeable, the vertigo entirely gone, and the gouty pains a thing of the past. For the past year his health has been more vigorous than ever, but only at the price of constant watchfulness, for any attempt at the indulgences of the table, either at once or with the lapse of two or three days, brings its penalty in arthritic pain, tinnitus, or vertigo, one or all.

The only wines that seem to cause no trouble are a thin table sherry and dry champagne. Better than either is a tablespoonful of brandy with dinner, which seems to be not only harmless but a positive benefit.

I make no apology for giving this case at some length, as I consider it to be a good illustration of a certain class of lithæmic cases, and typical of the nervous and gouty complications, while remarkably free from those renal and gastric symptoms which more generally accompany and obscure the diagnosis, for, as will be noticed, there were none of the ordinary symptoms to call attention to what was undoubtedly the true source of the difficulty, the imperfect assimilation of the ingesta. That vertigo and tinnitus, as well as other obscure and intractable complaints, especially those of the skin and mucous membranes, may often be traced to this so-called lithuric condition, whether it be designated as lithæmia or suppressed gout, there can be no doubt. I could give from my notes many other cases in which relief from distressing symptoms of long duration, and where the sufferers had become almost hopeless of relief, would be shown, but the narration would serve no other purpose than to lengthen this already tedious paper if given in detail. I will merely allude to a few of them as showing some of the common differences in type.

I. The son of a physician, married, aged 46, a high liver, had for three years been subject to these nervous symptoms. In this case, renal congestion was so marked a feature as to cause apprehension of some organic disease of the kidneys. Under proper treatment, the functions of the liver were restored, the nervous and renal symptoms disappeared, and he regained, and so far as I know is still in comparatively vigorous health.

II. A perfectly temperate man, aged 56, was for two years subject to vertigo. He had also muscular debility, nausea, and some anasarca. Under careful regulation of the diet, free action of the bowels, nitromuriatic acid, etc., the vertigo and muscular weakness disappeared, and his apprehensions with them.

III. A lady of middle age, with some suspicious renal symptoms, headache, nausea, œdema, etc., was under my care at intervals for two years. Early in 1882, though much improved in many respects, the nausea especially having nearly disappeared, she consulted me again for frequent and painful micturition and incessant tinnitus aurium. By the use of lithates, iron and aloes, bitter water, with whiskey and cream and a restricted diet, she obtained relief from all the nervous complications.

IV. A well-nourished and apparently vigorous man of 32, in active mercantile life, complained bit-

terly of seminal emissions and loss of venereal appetite, but chiefly of a constant sense of cerebral confusion, with loss of memory, at times so absolute that he could not remember the prices of his merchandise or make simple arithmetical calculations. He was married, and of steady habits, excepting that his meals were irregular and hastily eaten. He suffered to a slight degree from hæmorrhoids and headache. The emissions proved to be trifling and distinctly prostatic, not seminal. Being an excessive smoker, tobacco was strictly forbidden, and with proper regulation of the quantity and quality of his diet, and the use of saline laxatives and mineral tonics, the unpleasant cerebral phenomena were relieved entirely and permanently, a year having now elapsed without any recurrence.

V. While writing this paper a somewhat similar case occurs to me, not of vertigo, but of most unpleasant cerebral confusion, occasional attacks of distressing tinnitus, with muscular pains, tenderness and swelling of the small joints, and an increased renal secretion, with painful micturition. There has also been on several occasions a decided loss of power in the extensors of the forearm. The patient has been under my charge at intervals for ten years, and has had repeated recoveries from and recurrences of these symptoms, and will probably continue to have them to the end, for being of ample means and extremely indolent habits, the requisite perseverance in treatment is not attainable. It is sufficient to say that the tinnitus and other symptoms in her case always and readily yield to the treatment indicated so long as it is persevered in.

VI. I will allude to but one more. An old gentleman past seventy, has been for many years a notable specimen of the hypochondriac. He has, however, certain difficulties that are not imaginary, especially prostatic enlargement in an aggravated degree. He has for years suffered from tinnitus, slight vertigo, palpitations, and an aggravated catarrh of all the mucous membranes from the *alæ nasi* to the pylorus. He was under my care a year or two before I could get him under decent control. He was depressed, skeptical, sure that he was to lose his mind or die suddenly of apoplexy or heart disease, would follow a prescription for a day and then seek another, buy every quack medicine that was recommended (and serve it, fortunately, in the same way) until finally, under the threat that I could or would do no more, a promise of obedience was exacted and tolerably kept, until now, under comparatively simple treatment, life is no longer a burden to him or his friends, the tinnitus and vertigo, the catarrhal troubles and cardiac irregularities being immensely relieved.

The object of this paper is to call attention to those lithæmic cases in which tinnitus and vertigo are prominent symptoms, they being the most alarming and distressing to the patient of the nervous phenomena induced by an excess of lithic acid in the blood.

Many cases of tinnitus, no doubt, are very temporary, such, for instance, as are caused by slight gastric derangement, an excess of ceruminous deposit, local congestions, etc., while other and incurable

cases are due to actual organic changes in the auditory apparatus, and the same remark will apply to many cases of vertigo, whether from an acid stomach or actual fatty degeneration of the circulatory apparatus, but, other than these, I can recall many instances occurring in former years, where not suspecting what I now believe to have been the true cause, I was unable to afford that relief which I am now confident would have followed a more accurate diagnosis.

How, in deranged function of the liver, imperfect disintegration and oxidation of the albuminoids results in the excess of lithic acid in the blood, is a physiological problem, for the discussion of which I must refer to Flint, Draper, Bence Jones, Fothergill, Charcot, Murchison, and many others. The opinions of writers and experimenters are as yet quite at variance upon many points. A few remarks only are needed in this connection for the purposes of this paper.

And first, it is not sufficient to say that tinnitus is due to deranged circulation or irregular muscular action, for though both are probably true, what causes those derangements, and so of vertigo. We must go farther back, and find what causes are at work in the blood to influence the vaso-motor and trophic processes. An embolus in the middle cerebral we say results in aphasia, but we mean that aphasia is due to deficient nutrition in the brain cells.

That an excess of nitrogenous and carbonaceous foods, or, there being no excess, a relative deficiency of oxygen, results in imperfect oxidation, seems probable. Were the oxidation complete, instead of insoluble lithic acid we should get soluble urea for normal elimination by the kidneys.

On the other hand, we have the opposite view that an undue prominence has been given to uric acid in these gouty or lithæmic cases, that the difficulty rests rather with its insolubility than in its excessive production, that it is a consequence rather than a cause, and that the saccharine rather than the nitrogenous elements of the food are the most mischievous.¹ However this may be, the kidneys seem to play an eliminatory role chiefly, although it must be remembered that the necessary excess in activity may lead eventually to chronic congestion and secondary organic changes of structure.

The vaso-motor and trophic influences, the mode of distribution, as well as the nutritive quality of the blood, become also important factors in the production of the cerebral symptoms under discussion. If the blood of the living body should be always alkaline, it is not difficult to see that an abnormal excess of lithic acid would create these vaso-motor or trophic disturbances, one or both, in the circulation and nutrition of the brain and cord, a diminished alkalinity, whether relative or absolute, diminishing the contractility of the heart.

As to treatment, it is already sufficiently indicated, if we accept the theory of the lithæmic origin of the trouble. That the liver may rest from its overcharged labor, saccharine, nitrogenous, and alcoholic ingesta must be diminished, both sedentary habits on the one hand and excessive fatigue on the other, and over

cerebral exhaustion from study or worry avoided, they all tending to weaken the circulation and so favor acid accumulation.

With regard to the use of tonics mineral or vegetable, they are often worse than useless, especially in the early stage of average cases, in which, with a careful diet, mild saline laxatives perseveringly used are the best tonics. In anæmic or broken-down cases their use may be, of course, a necessity.

In most cases alkaline salts are indispensable and of these I have found citrate of lithia as useful as any, and perhaps the most agreeable to the stomach, although occasionally it overstimulates the kidney and must be suspended for a time, or replaced by soda or potash, taken an hour after meals, these being in all cases preferable when much flatulence is complained of. Salicylate of lithia I have not yet tried.

Where the pain is myalgic, muriate of ammonium in full doses will often give prompt relief, though if not within a day or two, its continuance is useless. I have found no benefit from it in arthritic pain or tenderness. Mercurials, podophyllin, colchicum, etc. must, I think, be rarely needed, and are objectionable from their depressing effect. Their influence upon the biliary secretion is at least questionable, and if the small intestines are kept free from biliary accumulation by saline or other laxatives, such as ipecac, rhubarb, and soda, they are not required. If there be any one thing which I should lay the most stress upon throughout the treatment it would be the use of aperient bitter waters. Nothing proves so promptly effectual in removing those exacerbations of arthritic tenderness, vertigo, and tinnitus, which the most tractable patient will occasionally bring upon himself by some indiscretion, as an extra dose of Hunyadi or Pullna water taken for a day or two in the morning fasting. By an extra dose I mean a larger and more active one, for I would have a smaller dose of the same used almost continuously and for months after the cessation of the urgent symptoms. These waters keep the small intestines free, and the sulphates of soda and magnesia with which they are highly charged have a cholagogue influence which goes for something. Their influence as combined in these waters is decidedly more satisfactory than when taken alone. The Carlsbad or *Sprudel* salts may also be mentioned in this connection, especially as they have been recently discovered to contain lithia, which the others do not.

The aggravated catarrhal complications may now and then require especial treatment, but in a large proportion of cases the troublesome nasal and faucial congestion will be found to yield with the lithæmia on which it depends.

As to the use of stimulants, most patients are probably better for entire abstinence, but in a certain class such abstinence can be with difficulty enforced. I know of no rule by which one can be guided but the experience of the patient himself. As a rule, of the light wines, the driest are the best. One will drink claret with impunity, while to others it is an undoubted poison, and the same may be said of champagne, burgundy, hock, etc. Climate, and especially hygrometric conditions become here I be-

¹ See Ralle on Morbid Urine pages 65-98

heve, an important factor. It is now a well-known fact that a patient will indulge with impunity in England or on the Continent in beverages both in quantity and in quality which, in our drier climate, cannot be assimilated. The first case reported was a striking instance of this, as was proved by his experience in repeated visits abroad.

In certain cases, stimulants with iron or bark and acids may, as I have said, become a necessity, especially if the alkaline treatment induces any marked impoverishment of the blood, for in all cases a lowering treatment is to be avoided. It must not be forgotten that one's living may be generous without being excessive in either food or drinks.

The patient should always be made to understand that the relief which he may receive is to be permanent only so long as the conditions of the cure are complied with, and that any indulgence or excess will almost inevitably be followed by its penalty, and moreover, remembering that too frequent recurrences of merely functional disorder are likely to result eventually in actual organic changes, no longer amenable to curative treatment.

In conclusion, I may be permitted to say that while the pathology of these affections remains, as at present, an open question with different observers, the successful treatment of a series of cases may help materially in its solution. Where medical Science is defective, medical Art may assist in placing it upon a right foundation.

RECENT VIEWS RESPECTING THE DIAGNOSIS AND TREATMENT OF LITHÆMIA

BY JAMES J. PUTNAM, M.D.

(Read before the Section for Clinical Medicine, Pathology and Hygiene of the Suffolk District Medical Society, November 14, 1883.)

It is well known that a tendency has been manifest of late among medical men in this country, as for a long time past in England, to diagnosticate as suppressed gout, or lithæmia, cases presenting a great variety of nervous symptoms, often anomalous and distressing in character, generally occurring in patients of gouty, but sometimes even in those of non-gouty descent.

This tendency has been met in many quarters with incredulity, and some men of conservative temperament would be well content to let the matter slip by with a verdict of non-proven. Where no overt gout exists it is gratuitous to assume suppressed gout, they say, and the argument seems applicable to this country and generation, in which overt gout is so rare. Such an attitude seems to me to involve the disregard of clinical facts of manifest importance, yet I admit that even this is better than to abandon one's adherence to the laws of evidence for the sake of a plausible hypothesis. It is evident that there is a middle ground to be discovered, and it is important, in the interests of practice as well as theory, that its limits should be defined as accurately as possible.

Two questions naturally suggest themselves for solution in this connection, first, what are the ascertained facts in the matter? second, what are the in-

ferences which involve the least infraction of sound reasoning?

The conclusions which seem to me the best established are —

(1) That various nervous symptoms, and symptom-groups, (as well as certain affections of the skin and mucous membranes) may be due to disorders of nutrition of the body at large, and are best treated from that stand-point.

(2) That, however, it has not been shown, nor rendered especially probable, that these symptoms are apt to be due to an excess of uric acid in the blood, except in so far as they occur in true gout.

(3) That the effects of treatment in cases of so-called lithæmia are not such as to lend much support to the belief that it is a specific disease.

(4) That there is abundant justification by analogy for the view that the impaired health found in the families of gouty persons need not itself be of a gouty nature.

(5) That most, if not all, of the so-called lithæmic symptoms may and often do originate in a primary disorder of the nervous system (including true neurasthenia).

It will be worth while, to begin with, to glance briefly at the few advances which have been made in the pathology of true gout during the past few years.

It is well known that the one discovery bearing on this subject which has been able to maintain itself almost unassailed, is that announced by Garrod in 1848, that the blood of gouty patients contains uric acid.

The explanations by which he proposed to account for the outbreaks of the disease, namely, that diminished excretory power of the kidneys caused a further accumulation of the uric acid in the blood, and that diminished alkalinity of the blood caused the precipitation of urate of soda in the tissues, have not fully stood the test of criticism. They remain as unproved, indeed as improbable, though noteworthy speculations.

It is, however, worth bearing in mind that diminished alkalinity of the blood, such as is supposed to arise from dyspepsia with constant formation of acid products in the intestinal tracts, though it may not cause gout or lithæmia, has been regarded as accounting for a variety of nervous symptoms such as are usually attributed to suppressed gout. This is a view taken for example by Dr. Ralfe, in his interesting little book on Morbid Urine.

Garrod's original researches left the origin of the uric acid unknown, though he believed that the kidneys themselves should be exonerated.

In 1874 Murchison delivered his able and suggestive Croonian Lectures on Functional Diseases of the Liver, and then first proposed, I believe, the term *lithæmia*. Murchison's aim was to show that, among its other important functions, the liver was the great laboratory for the conversion of nitrogenous compounds into urea, and inasmuch as uric acid resembles urea except in containing less oxygen, and may even be converted into urea, it was maintained that uric acid was one of the suboxidation products of albumen metabolism, and that the liver might be consid-

ered responsible for all the range of diseases, from chronic bronchitis and dyspepsia to gout and chronic Bright's disease, which could be laid to the door of the baneful uric acid and its congeners in the blood.

The liver is still admitted to be the seat of much chemical change, and the efforts of Murchison no doubt did much to clear its somewhat rusty clinical reputation, and to call general attention to its important functions and diseases. Yet, in spite of the guarded support of Charcot a few years later, Murchison's theory of hepatic lithæmia has not taken the place in pathology which its author claimed for it. The suboxidation part of it, which is for us the important portion, deserves special consideration, since it concerns the doctrines of the treatment of gout as well as of its pathology.

It is now almost universally regarded as probable that in health uric acid and urea are parallel and normal products of albuminous disintegration, and not simply representatives of different states in one process.¹

Increasing the oxygen supply makes no difference in the oxidation of uric acid. The amount of oxygen in the blood does not in fact determine the amount of chemical change in the body, but is determined by it, the oxygen being called in only to repair the waste already caused.² The oxidation of nitrogenous compounds is a function of the tissues, and its activity is measured by the number and efficiency of the cells of which the tissues are composed. The oxygen by which this is accomplished is stored up in the tissues. The oxygen in the blood serves to feed this reservoir, but to this end there is always enough unless the blood is actually starved, as in asphyxia.³ Similarly, the reason why carbonaceous food is not good for gouty persons (when such is the case), is not because it attracts the oxygen which would have gone to complete the oxidation of the albumen, but for more complex reasons (v. Voit).

Setting aside, however, the special question of the relation of uric acid to urea, it is quite true that the general doctrine that diseases of various kinds (renal among the rest) may arise from the presence in the circulating fluids of the results of imperfect metamorphosis of food, still holds a respected place among pathologists, as an important, although as yet improved hypothesis. As a practical matter, it is certainly very proper that in any doubtful case we should make every effort to improve the efficiency of the tissues to convert and assimilate food, both directly by acting on the tissues and the circulation, and indirectly, by modifying the quality and quantity of the food, and there are good clinical reasons for thinking that in that way we shall often succeed in removing obscure nervous symptoms, but this admission is by no means equivalent to the adoption of the prevailing theory of lithæmia.

Within the past year, our knowledge of the gouty processes has been enriched by two important investigations, carried on respectively by Garrod⁴ and by

Ebstein,⁵ Professor of Clinical Medicine in Göttingen. Garrod's investigations were mainly directed to the question of the relation of the excretion of uric acid to the formation of calculi, but in the course of them he makes some interesting statements about the amount of uric acid excreted by birds, which seem to prove that in them this substance must be formed in the kidney itself, and if in them, he thinks, then in all probability in man also, contrary to his former view. The quantity of this excretion in certain birds is indeed enormous, the daily amount being sometimes more than the whole weight of the kidneys. Knowing the average amount which the blood contains, and calculating the number of times that the kidneys refill themselves with blood in the course of the day, Garrod confidently affirms that they could not in that way obtain a sixth part of the uric acid which they excrete. He claims also to have found that the reason that the urine of herbivorous animals contains no uric acid, is because they form hippuric acid from their food, and affirms that the uric acid excreted by man is greatly diminished, or made to disappear, if benzoic acid, a congener of hippuric acid, is taken by the stomach, a suggestion important for the treatment both of calculus and gravel, and of true lithæmia.

The able investigations by Ebstein are largely experimental in character. He fully indorses the uric acid theory of Garrod, and makes it probable that the uric acid salts, even while still in solution, impair the nutrition of the tissues through which they pass, and if in concentrated solution impair them (as proved to be possible by actual experiment) to such an extent that the life of the tissues is destroyed, and in dying develop an acid reaction which causes the precipitation in them of the urate of soda. To this irritating action of these salts in solution in the blood he thinks the various symptoms referable to affections of the mucous membranes, the nervous system, the walls of the blood vessels, etc., are due, and in fact he fully gives in his adherence to the doctrine of lithæmia in the gouty. The uric acid he believes to be formed not in one alone, but in many organs, among which are to be reckoned (in gout, though not under normal circumstances) the marrow of the bones and the muscles. Ebstein regards gout, therefore, as a disorder of nutrition in consequence of which uric acid is formed abnormally in the bones and muscles. He considers it analogous to cystinuria, or to diabetes, but does not recognize the agency of any underlying neurosis which various writers, especially Dr. Duckworth, have assumed. He extends widely the role played by uric acid, about as widely, in fact, as any of the English writers, but would say, that without uric acid no gout. At the same time he thinks that this excessive production of uric acid may remain through life without causing symptoms of any kind, if no exciting cause comes in to provoke them.

The arguments by which Dr. Duckworth⁶ who is able to array a number of the highest authorities on his side, endeavors to prove gout to be at bottom a

¹ Vide for ex. Cohnheim's *Handbuch des allgem. Pathologie*.

² Voit. *Die Ernährung*. Hermann's *Handb. d. p. 79*.

³ Voit. *Senator*.

⁴ *Lancet* 1882, Vol. 1.

⁵ *Natur u. Behandl. d. Gicht*.

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tropho-neurosis, either primary and inherited, or secondary and induced by blood-poisoning, are ingenious and forcible, but of such a nature that it would be impossible to reproduce them here at length. He thinks that without invoking the periodic action of the nervous system it is impossible to explain the outbreaks of the attack, which come sometimes without apparent cause, usually early in the morning, and are apt to be preceded by a sense of euphoria, such as is sometimes seen before an attack of epilepsy, migraine, and the like, further, that gout evidently stands in a close relationship of mutual dependence and interchangeability with other neuroses, such as epilepsy, hysteria, asthma, migraine, angina pectoris, that the exciting causes of the acute seizures are often such as depress nervous force, like strong mental and moral excitements, venereal excesses, or sudden shock, without, however, acting directly upon the affected joints, and, finally, that the ability of the nervous system to influence nutrition, as seen in the arthritic complications of certain forms of locomotor ataxia and other diseases, is becoming more and more fully recognized.

Let us now turn to a consideration of the doctrine of lithæmia or suppressed gout, taking as representatives of the positive side of the discussion two of its most earnest supporters in this country, Dr. DaCosta,¹ of Philadelphia, and Dr. W. H. Draper, of New York.

Dr. Draper's views were expressed in one of the American Clinical Lectures in 1875, and more recently, in a modified form, in a paper read before the New York Academy of Medicine in February, 1883.*

In the latter paper, Dr. Draper refers to the difficulties in the way of the humoral or chemical theory of gout, and admits that it may be primarily a neurosis, and that the over-production of uric acid and its presence in the blood may be only an epiphenomenon in the disease. His views of the subject of diet have also been modified, but he finds that, in general terms, gouty patients and their descendants have especial difficulty in the digestion of saccharine and farinaceous food. The symptoms described in the first paper as of a lithæmic origin include flatulent and acid dyspepsia, painful and frequent micturition, commonly associated with the presence of uric acid, urates or oxalates in the urine, neuralgic symptoms of unusual type and without tender points, burning sensations in the palms and soles, numbness of the hands and fore-arms, pain in the region of the tendo-Achillis and the dorsum of the foot, hypochondriasis and hysteria, chronic bronchitis, asthma, conjunctivitis, gastro-intestinal catarrh, aphthous ulcerations in the mouth, obstinate eczematous and erythematous lesions of the skin, the latter sometimes showing themselves in sudden swelling of the eyelids, cheeks, lips, and tongue, together with many other symptoms.

Dr. DaCosta lays especial stress upon vertigo, severe acute periodical headaches of neuralgic type, neuralgia, sometimes bilateral, burning pains in the feet and hands, and also gastralgia, cramps in the legs, sleeplessness, irritability, or great depression of spirits,

and the like. Other writers have referred to tinnitus aurium, (such as Dr. Lyman has described to night,) irritability of the bladder, painful menstruation, etc.

In seeking for the pathology of these symptoms, two questions naturally present themselves.

1. What evidence is there of the existence of an excess of uric acid in the blood, a condition which is assumed without argument by DaCosta, and by Draper in the earlier, though not in the later paper?

2. What other signs have we that would justify us in setting apart these cases as belonging in a group by themselves, or as standing in any definite relation to the gouty diathesis?

Of direct evidence by examinations of the blood, none, so far as I can learn, has been furnished (though Garrod speaks of its great desirability), except that Draper found an excess of uric acid in a case of gonorrhœal rheumatism which he believed to be of gouty origin. Ball (quoted by Charcot in Diseases of the Liver) found uric acid, to be sure, in the blood of a patient suffering from gravel, an observation to which we shall refer again further on. The only indirect evidence that is offered of the presence of uric acid in the blood consists in the more or less persistent presence in the urine of free uric acid or its salts. This was noted in almost all of DaCosta's cases, and he dwells upon it at some length.

What is the real significance of this sign? Chemically, it certainly indicates nothing more than increased acidity or condensation of the urine, no matter from what cause, which facilitates a precipitation of the uric acid and urates. A real and persistent increase of the total amount of uric acid is very exceptional, and would usually indicate, according to Ralfe, some serious organic or constitutional disorder, such as organic disease of the liver or spleen, phthisis, or cancer. It is not even a regular accompaniment of true gout.

From the clinical standpoint, the matter is not quite so simple. So good an observer as Garrod finds from analysis of his numerous cases, that gravel and calculus are more prevalent among the descendants of the gouty than among those of the non-gouty, although the gouty patients themselves do not often pass calculi.

The same view is taken by most other writers.¹ The observation of Ball has already been quoted. Charcot (Diseases of the Liver) refers to the observations of Rayer as pointing in the same direction, but says that he has himself several times examined the blood and serum from blisters of patients habitually passing uric acid crystals or concretions without finding a trace of uric acid. On the whole, in spite of the mysterious but accepted relationship between gout and gravel, it is impossible to read at all extensively the views of the best authorities without becoming convinced of two facts. First, that to draw any inference from the precipitation of uric acid and urates in the urine, this must be proved to be really habitual, and not to be accounted for by concentration of the urine due to ingestion of too little fluid, or to temporary indigestion, and second, that even when this

¹American Journal of Medical Sciences 1883

²New York Record February 24

¹Vide Nouveau Dict. de Med. et Chir. art. Gravelle where this whole question is treated with much fairness.

is not the case the most that we can say is that we have evidence of a disorder of nutrition which is sometimes associated with lithæmia

I have in my mind a large family of persons who are, or have been almost all, sufferers from functional nervous disorders, such as insomnia, visceral neuralgias, mental depression, irregularity of the heart, etc. One of them has had what was perhaps gout, though that disease is not known to have been inherited. One member passes uric acid at long intervals for some days at a time, but the one who is the most free from morbid symptoms, and usually in good health, passes urine which habitually deposits urates in considerable quantity.

To turn to the second question, Do the symptoms in the cases that have been called lithæmia present anything really characteristic, we will not say of lithæmia, but of any classifiable condition, and especially of one related in any way to gout?

There is some reason, no doubt, to think that this is the case.

The burning palms and soles, the anomalous and sometimes bilateral neuralgias, the gastralgia and marked tendency to catarrh of the mucous membranes, and other symptoms are said to be frequently met with, both in cases of true gout, and on the other hand in cases of another class, the limits of which we are trying to define. This class is believed by excellent observers to be very largely recruited from the families of gouty patients. Two considerations are, however, especially to be borne in mind.

(1) That we are only just beginning to learn the range of symptoms due to functional disorders of the nervous system from causes arising within itself or from simple insufficiency of nourishment (so-called neurasthenia).

(2) That it is by no means certain that even in true gout, all the symptoms referred to are due to the uric acid in the blood, since many of them may occur, as is pointed out by Ralfe, under any circumstances, such as scurvy, where the relative acidity of the blood is increased in consequence of the quality of the food (withdrawal of alkaline bases, etc.), or in disorders of the digestion, some of these latter being at times dependent on syphilis or other constitutional diseases.

To return to the first consideration, it is difficult to see why we should, in the interests of lithæmia, dispossess the doctrine of primary neurasthenia of its just claims. There seems no reason why a person should not acquire or inherit, perhaps from a gouty parent, a poorly-working nervous system, and this seems often to happen, since the symptoms referred to may be present without there being any sign in the history of the patient or the condition of the urine to suggest a gouty origin. And if the nervous system can suffer upon its own account, the burden of proof surely rests with those who would refer the results actually observed to the immediate influence of poisoned blood. Whether or not lithæmia is inherited from gouty parents, however, it appears certain that such persons are apt to exhibit themselves, and to transmit to their descendants strongly marked neuroses, both general and special.

Finally, how far is it possible to judge from the effects of treatment whether the blood is lithæmic, or whether a given set of symptoms are related to true gout? First, we must decide in what the appropriate treatment of true gout consists. Is there anything about it which can be called specific? Some years ago this question would, no doubt, have been answered in the affirmative, but the notions with regard to the treatment of gout have, of late, undergone a considerable change. It has long been known, and the point has been dwelt upon anew at some length by Garrod in his recent paper, that the excretion of uric acid is very little affected by an increase or diminution of albuminous food, and Garrod distinctly states that he believes patients to have suffered in their health from the scanty diet of former times. Dr Draper, as well as most other writers, now believe that nitrogenous food may be taken pretty freely. It is the hydrocarbons of the food, the sugar and the starch, which are now considered the objectionable portions, but it is very interesting to see the different grounds on which this opinion is maintained. Thus Ralfe, believing that gout is a disease of too great acidity, and analogous to scurvy and rheumatism, thinks the sugar is converted in the intestinal canal to lactic acid, and eventually in the blood to carbonic acid, and that the alkalinity of the fluid is thereby reduced.

Dr Draper finds that gouty patients, as a rule, cannot digest sugar or starch easily, and that as a clinical fact these substances do not agree with them, and should be interdicted. Ebstein thinks them objectionable solely because they increase the corpulence of the patients, and thereby indirectly predispose to gout in various ways, an idea which is upheld by some observations in a different field by Frenkel,¹ namely, that corpulent persons are more likely to suffer from enlargement of the heart through interference with the abdominal circulation. Garrod believes himself to have discovered that it is not sugar in its natural state, but only in a partially fermented state, as in beer, wines, certain fruits, and the like, that is objectionable, perhaps from giving rise to some injurious ferment.

Again, apart from gouty tendencies, there are stomachs enough to whom sugar and starch are not indifferent, and it is evident that more extended observations are needed before we can admit that the ability to digest and assimilate hydrocarbonaceous food is enough to distinguish between the possessor of the gouty taint and dyspeptics of other kinds. This does not, of course, interfere with the fact that the observations of Dr Draper and others tending to show that there is a large class of nervous dyspeptics for whom sugar and starch are inadmissible are, if confirmed, of the highest practical importance.

The truth probably is, that the nutrition of patients of this class of so-called lithæmics (in reality perhaps not lithæmic at all) has to be carefully watched and adjusted to the case in hand.

For my own part I am inclined to think with

Ralfe, that over-feeding combined with freedom from excitement and care, is often for a time a better plan even than underfeeding or moderate, with exercise, while the combination of over-feeding and nervous excitement is, perhaps, an especially unfortunate one. Certainly, among the multitudes of neurasthenic patients who have improved, temporarily or permanently, under Dr Weir Mitchell's treatment of over-feeding, with rest in bed, there must have been many of the so-called lithæmic class, if this class is anything like so numerous as is believed.

To conclude, I would express as my provisional opinion that the interests of medical progress would be best served if we avoided for the present the term lithæmia altogether, studying on the one hand, as if *de novo*, the causes which lead to a precipitation of urates in the urine, and observing, on the other, to see whether the nervous symptoms, the dyspepsia, etc., occurring in the descendants of gouty patients, are essentially different from the neurasthenias and dyspepsias in patients who cannot be suspected of the gouty taint. At the same time, whether their explanations are right or wrong, the extremely important service which such observers as Murchison, DaCosta, Draper, and others have done in showing that some close connection exists between disorders of general nutrition and a great variety of symptoms which had hitherto been studied too much in detail alone, is worthy of the fullest recognition.

PERITYPHLITIS

J. W. COWDEN, M.D. ROCK ISLAND, ILL.

[Read before the Iowa and Illinois Central District Medical Association, October 9, 1883.]

Mrs. McK., a resident of Rock Island, Ill., born in Wales, 35 years of age, the mother of three children, weight 135 pounds, began complaining of pain in the right iliac fossa in the fall of 1882. Her family physician, Dr. Thomas Galt, diagnosed the case as neuralgia, and gave her prescriptions which he said would remove the trouble. The pain continued throughout the winter, the patient herself during that time being conscious of a swelling or induration on the right side. About the 10th of March, 1883, she was compelled to take to her bed. The doctor, then visiting her from day to day, told her "there might be danger of an abscess," and immediately set in operation vigorous and active measures for "scattering" the tumor. These measures consisted in kneading and rubbing, at the same time using a liniment to assist in the dispersing process, the doctor telling the patient "the tumor could be scattered by persisting in this method of treatment," he himself participating in the work. With the addition of hot fomentations, under the doctor's instructions this plan of treatment was faithfully carried out by the patient's friends until the 24th day of May, when he made his last visit. He then told her "the tumor was scattered, that he was going away for awhile, but would leave medicines to do until his return, that he would expect to find her well by the time he got back, and that it would not be necessary during his absence to call in another physician."

Three days after the doctor left I was called to see this patient, and found her lying upon her back, the right leg flexed upon the thigh, and the thigh drawn up on the pelvis, in which position she had lain for seven weeks without being able to straighten the limb or to be turned over in the bed. There was a large bed-sore, a most formidable complication, on her back. She was having two or three chills a day, followed by fever and profuse perspiration, pulse 150, and temperature 105°. Had not taken any nourishment for several days. She was so much emaciated that the bones looked to be almost protruding through the skin. I told her husband that she was suffering from perityphlitic abscess, and was then almost in a moribund condition, and without an operation for her speedy relief she must soon die, that in her present exhausted condition the chances were very much against her getting well after the abscess was opened, that she might die, too, during the operation, but as an operation was the only means of relief for her, we must either abandon her to her fate, or "as a forlorn hope," give her this last chance.

After short deliberation, he told me to operate, but as the doctor in charge of the case three days before I was called had told them all danger had passed and that she was then getting well, I requested that some other physician be called in consultation. In accordance with this request, Dr. S. C. Plummer was sent for. The doctor, on his arrival, fully concurred in my opinion. An ounce of whisky was then given, and in twenty minutes thereafter the doctor administered the ether. I then divided the integument and fascia for about two inches in the direction of and parallel with Poupart's ligament, and proceeded to open the abscess by dividing the superimposed structures upon a grooved director until the transversalis fascia was reached, in which I made an opening sufficiently large to admit the forefinger. The abscess then discharged what was estimated at the time to be about three pints of horribly fetid pus.

On regaining consciousness, after the ether, she was in a state of extreme collapse, and was taken with violent retching, borborygmus, and occasional vomiting of glairy mucus, so that I was obliged to remain with her for several hours. I administered whisky by the mouth, and gave her morphine sulphatis, gr. ss., whisky 5i, hypodermically. A mustard sinapism was applied over the epigastrium, and hot applications to the extremities. After several hours of extreme suffering, the retching ceased, reaction came on, and the patient soon expressed herself as being greatly relieved. Her back and hips were then supported by a circular air cushion, which afforded great relief by removing all pressure from the bed-sore. She was then put upon an analeptic and supporting treatment, milk punch was taken freely, milk and eggs beaten together, milk and lime-water, animal broths, and the beef-peptoids.

The cavity of the abscess was washed out daily for ten days with carbolic acid water, solution 1 to 80, after which it was washed out twice a day with tepid water. A rubber drainage tube was inserted, but after a few days, this becoming intolerable, a horse-hair drainage tube was used in its stead. This seemed

to answer every purpose, the drainage taking place by capillary attraction. This tube was removed twice every day, thoroughly cleansed by washing in carbolic acid water, and again replaced. In about seven weeks from the opening of the abscess all discharge had ceased, the drainage tube could no longer be replaced, the patient, up about her apartments, was improving rapidly, and all the symptoms pointed to a speedy recovery. Some days after this, however, she became restless, her appetite diminished, her wonted cheerfulness gave way to an anxious expression, and she soon began to complain of deep-seated pain in the cæcal region. I then became satisfied that fresh trouble was to be expected, and at once proposed administering ether and re-inserting the drainage tube. To this proposition she would not at first consent, her previous experience with the ether having caused her to believe if she took it again she would die. In a short time, however, she made up her mind to be governed by my advice. She had no fears from the operation, her great dread was the ether. Dr Plummer not being at hand, at the patient's request, Prof W F Peck, of Davenport Iowa, was called in. Ether was again administered, and Prof Peck re-introduced the drainage tube. A small quantity of matter was then discharged, the patient soon regained her appetite, and all the other unpleasant symptoms rapidly passed away. This tube was allowed to remain for three days, when I removed it, cleaned it thoroughly, and again replaced it. It was afterwards taken out twice daily, the cavity well washed out, and the tube again re-inserted. On the 16th day of August a small fecal concretion came away, on the 18th two more, after which the discharge soon ceased and the cavity rapidly closed. At this writing, October 4, 1883, the patient has entirely regained her former good health, all trouble in the cæcal region being entirely removed.

Perityphlitis usually consists of a circumscribed inflammation in the connective tissue about the cæcum, its most striking characteristic being a circumscribed swelling, or, rather induration, in the neighborhood of the cæcum, situated above and in close proximity to Poupart's ligament. The tumor, immovable, deep seated, and tender on pressure, may generally be discovered within forty-eight hours after the onset of the disease, by palpation of the right iliac fossæ, or by digital exploration of the rectum. There are cases, however, which are not thus circumscribed in which perforation of the cæcum or appendix vermiformis, is rapidly followed by fatal septic-peritonitis. The following symptoms are generally present: abdominal tenderness and pain in the right iliac region, usually occurring suddenly, and attended with the ordinary symptoms of fever which mark the onset of suppurative, phlegmonous inflammation, nausea and vomiting, acute pain and tenderness in the cæcal region, frequent pulse and high temperature, the thermometer, in some cases, reaching 105°. The pathological condition in perityphlitis cannot always be determined, it is the result, in many cases, of a diseased condition of the appendix vermiformis, it is due, in most cases, "to foreign substances, usually gall stones, or fecal concretions, entering the appen-

vermiformis," in others, "to impaction of feces in the cæcum," "it has occurred after unusual muscular exertion," "it has followed the intestinal lesions occurring in continued fever," whilst, in other cases, no adequate cause could be discovered. The proximate cause of the characteristic induration, however, points to a plastic inflammation of the connective tissue adjacent to the cæcum, this inflammation often following upon a diseased condition of the appendix vermiformis. The large number of cases terminating by resolution, without eventuating in abscess, some as early as the fifth, others at the eighth to the fourteenth day, while others again may go for many months, being, to my mind, at least, confirmatory of some lesion of the appendix. If left to itself, perityphlitic abscess does not always terminate unfavorably, it may open into the bowels, into the bladder, or externally, and the case progress to a favorable termination after that. However, the rule, adopted by Gross, Parker and Sands, for opening the abscess by a free and early external incision, is not invalidated by the occurrence of exceptional cases.

Dr Henry B Sands, in a very able article published in the *The Encyclopædic Index of Medicine and Surgery*, reports twenty six cases of perityphlitis as having fallen under his observation.

"Of these, twenty-two cases were observed in males and four in females. The youngest was nine years of age, and the oldest fifty-four. Of the rest, ten were between ten and twenty, seven between twenty and thirty, two between thirty and forty, and five between forty and fifty."

The doctor makes four divisions of his cases. *First*, ten cases which terminated in resolution, without evidence of suppuration, *second*, three cases of abscess terminating in spontaneous recovery, two of them opening into the bowels and one opening into the bladder, *third*, eleven cases treated by operation, *fourth*, two cases in which the abscess terminated fatally, without discharging its contents.

In the cases treated by operation, "fluctuation occurred in four cases." The date of the operation in one case is not recorded, in the other cases, the abscess was opened in one on the ninth day, two on the twelfth, one on the thirteenth, one on the fifteenth, one on the seventeenth, two on the twenty-first day, and one at the end of the ninth week, respectively. "The last named case," says Dr Sands, "in which the operation was so long delayed, terminated fatally by septicæmia. At an earlier stage of the disease, and before fluctuation was evident, I proposed an exploratory incision, but the patient refused to submit to it. When, at last, the abscess pointed over the middle of the crest of the ilium, it had already burrowed extensively and acquired extraordinary dimensions. After being opened it continued to discharge very copiously, and, in spite of the employment of antiseptic injections, septicæmia occurred and carried off the patient. The case is instructive as illustrating the danger of delay, for it is the only one operated upon in which death followed the operation. Had the abscess been opened at an earlier period a favorable termination would probably have been averted."

"In the early stage of the disease it may be impossible," says Dr. Sands, "to discriminate between the cases that are going to terminate by resolution and those that are to end in suppuration, the latter may usually be distinguished toward the close of the second week by the generally unfavorable condition of the patient, who seems to be growing worse instead of better, whereas, when resolution is about to take place, the later course of the disease is comparatively mild and favorable. In one remarkable case, wherein the affection continued for many months and ended without suppuration, the combination of symptoms was never such as to demand surgical interference, although on two occasions I was nearly persuaded to undertake an exploratory operation."

In all of the eleven cases reported by Doctor Sands, except the first, the abscess was found and opened. "In the one in which the incision was made on the ninth day, no abscess could be discovered, although the knife was carried through the fascia transversalis, and the hypodermic needle thrust in various directions, in the hope of finding pus. After the operation the patient grew worse and his life was despaired of, when, eleven days later, an abscess broke and discharged its contents through the wound. Perhaps, in this instance, the operation was serviceable by dividing dense structures, which might have offered resistance to the progress of matter toward the external surface, but it would, of course, have been more gratifying if an abscess had been reached at once. Usually, a perityphlitic abscess remains of moderate size until about the end of the second week, and by deferring an operation until it is ripe, we shall find the deeper textures consolidated and agglutinated by plastic lymph, and, therefore, less liable to be infiltrated by the foetid discharges, which, after incision, often cause more or less sloughing of the margins of the wound. On the other hand, the danger that the abscess, if unrelieved, may rupture into the peritoneal sac must not be forgotten."

Doctor Wiener was called to see a gentleman who had been ill for six days with perityphlitis. The characteristic tumor was present in the iliac fossa, and the case being regarded as one of abscess, arrangements were made to open the latter on the following day. During the night, however, in consequence, it is supposed, of some incautious movement made by the patient, rupture into the peritoneum took place, and death ensued ten days afterward. The bursting of the abscess was indicated by a disappearance of the tumor, and by collapse, followed by the usual symptoms of peritonitis. I believe such an event as this is very rare, but the possibility of its occurrence must make us watchful and anxious until the crisis is passed. Everything depends on an exact diagnosis and on an early recognition and treatment of existing abscess, and I would suggest a far more frequent employment of the aspirator, as affording the most reliable test at our command for purposes of diagnosis."

Perityphlitis may occur more than once in the same subject. I find, in the cases reported by Dr. Sands, one patient had a second attack, which terminated by resolution thirteen months after a successful

operation for abscess. In another patient there occurred no less than three attacks of perityphlitis within a period of two years, the last one only eventuating in abscess. In another case, an abscess formed two and a half years after an attack, which terminated in resolution. "Such cases should teach us to be guarded in our prognosis respecting the liability of a recurrence of the disease."

"It is generally assumed that when an abscess results from perforation of the appendix, the matter is contained in the peritoneal sac, a portion of which is shut off from the rest by adhesions between the intestines, the parietal peritoneum, or the omentum." Such a mode of origin is quite exceptional, and when, in consequence of intestinal perforation, fecal matter escapes directly into the peritoneal cavity, the result is almost invariably a diffused septic inflammation of the peritoneum, ending in speedy death. Pathological anatomy has shown the possibility of another mode of abscess formation, which I believe to be far more common. The vermiform appendix, before becoming perforated, may contract adhesions to the peritoneum lining the iliac fossa, on which it usually rests. Consequently, when the coats of the appendix have been destroyed, the ulceration extends through the opposed layer of the peritoneum in such a manner that the fecal matters, instead of entering the serous sack, gradually pass into the loose connective tissue which lies outside the peritoneum and there set up suppurative inflammation. The pus, as it accumulates, may burrow behind the cæcum and ascending colon, or it may descend behind the peritoneum into the pelvis, or, as most often happens, it may occupy more or less completely the iliac fossa. In the latter case, the serous membrane, which is here very loosely adherent to the iliac fascia, will be detached and deflected toward the median line, carrying with it, in the same direction, the cæcum and the small intestine. Here there will be little danger of wounding the peritoneum while opening the abscess, provided the operator avoids the upper and inner margins of the tumor, where the serous membrane forming the boundary of the abscess is reflected upon the anterior abdominal wall. Of course, in the event of an erroneous diagnosis, grave accidents might occur, for an incision which, in the case of an abscess, would simply enter the suppurating cavity might otherwise penetrate the peritoneal sac, and perhaps also involve the intestine. The aspirator, as has been stated, offers the best safeguard against such a blunder, and should invariably be employed in doubtful cases."

Of the two cases which terminated fatally, "with out the abscess discharging its contents either internally or externally," the first "was seen in consultation with Dr. Smith Ely, of Newberg." The patient was a gentleman forty-eight years of age, who, after having suffered for some time with the symptoms of inflammation in the region of the cæcum, was seized with general peritonitis. At the time when he came under my observation, I found the abdomen greatly distended, but could discover no tumor in the iliac fossa, or in the rectum. He declined to submit to the usual exploratory operation, but allowed me

to cut through the skin and the thick, subcutaneous fat, and to insert the needle of a hypodermic syringe into the deeper tissues. This was done with a negative result. Death occurred from peritonitis, and a post-mortem examination revealed an extensive abscess behind the cæcum and ascending colon, reaching as high as the under surface of the liver, and communicating with the intestines through an ulcerated opening in the posterior wall of the cæcum. The abscess was filled with pus and blood, and did not open into the peritoneum. The vermiform appendix was intact."

"The second patient, a gentleman forty years of age, I saw in consultation with Drs Rodenstein and Otis. The history of the disease pointed clearly to perityphlitis, but there was no tumor. Digital exploration of the rectum failed to discover any swelling, but detected slight tenderness high up on the right side. On the fourth day the patient became somewhat delirious, and on the sixth day, he had a convulsion. From that time until his death, which took place on the sixteenth day, the symptoms were those of cerebral inflammation, the patient dying comatose. A post-mortem examination discovered the changes in the brain characteristic of purulent meningitis, and the disease, in this case, seemed to be pyæmic, for, on opening the abdomen, an abscess containing eight ounces of foetid pus was found situated in the lumbar region, behind the cæcum and ascending colon. The abscess communicated with the vermiform appendix, which was the seat of a double perforation. No tumor existed in the iliac fossa. There were no evidences of peritonitis except the presence of some adhesions connected with the appendix. These two cases show that a perityphlitic abscess may be situated altogether behind the colon, and suggest the propriety of inserting an aspirating needle through the posterior wall of the abdomen, when the symptoms of perityphlitis are present without the development of the usual iliac swelling. Should matter be found, it could then be evacuated by an incision like that usually made in the operation of colotomy."

Dr Thos F Rochester, of Buffalo, N Y, in the thirtieth volume of "Transactions of the American Medical Association," reports a case of perityphlitic abscess discharging into the bladder and rectum, with pathological specimen. The doctor says "In June, 1875, I was consulted in my office by Michael Hays, 28 years of age. He had a swelling in the right iliac region, tender to the touch, and painful all the time, and especially on motion. It appeared to be deep seated and circumscribed, not very prominent, and about as large as an orange. Hernia and bubo being excluded, it was a question between iliac or perityphlitic abscess. I called upon him the next day with Prof J F Miner, prepared to make at least an exploratory operation. To our surprise, he informed us that the tumor had subsided, and that he was passing pus and fecal matter by his urethra. Of this he gave us ocular evidence. As this vent had occurred, it was decided to watch the case. Tonics were prescribed and rest enjoined. He remained under observation for six months, and was able to walk about,

and even do light work. In January, 1876, he went to Bellevue Hospital, New York, and consulted Dr Gouley and others, but received no encouragement to undergo an operative procedure. He returned to his home, and was seen by different physicians. He died September 20, 1878.

"Dr John Boardman, his last attendant, invited me to a post-mortem examination, which he conducted with great care and skill, and to whom I am indebted for the pathological specimen shown. The body was extremely emaciated. There was no swelling in any part of the abdomen. In the right iliac region the intestines were firmly adherent to each other and adjacent parts. It was difficult to isolate the caput coli. The enlarged appendix was firmly attached to the anterior abdominal wall, and appeared to have emptied itself into an abscess, probably formed by its discharge. The abscess contained about two ounces of fecal matter and pus, and communicated by a large orifice with the vis-fond of the bladder, and by another with the rectum, which was drawn over to the right iliac region, there was a small channel opening into the caput coli. The abscess had, in fact, four openings, two of ingress and two of egress, and yet so firm were the adhesions surrounding it, that there was no escape of its contents into the peritoneal cavity. It is probable that an early operation would have been successful. It is not impossible that a very late one might have been, even some time after the discharge into the bladder and rectum had taken place. As none of the organs were found diseased, it is probable that the man died from exhaustion, or, possibly, from purulent absorption. He lived for over three years in a most pitiable state, after the abscess had established for itself partial outlets, and from the information obtained by the post-mortem examination, it is much to be regretted that his urgent and repeated appeals for a surgical operation were not complied with."

The doctor reports twenty-three cases of perityphlitic abscess as having occurred in his practice. Most of these terminated fatally, a post-mortem examination was had in every instance. The doctor says "They have generally been caused by disease and perforation of the appendix vermiformis. It is my belief that, in the great majority of cases, this appendix is in a diseased condition before it receives the foreign body which causes subsequent ulceration and perforation. It is described by Rokitsky as of catarrhal character, causing general enlargement, and dilatation of its orifice and canal. It may become very thick or very thin in its walls. In the latter case it sometimes shrivels and shrinks entirely away. The foreign bodies are usually gall stones."

I find, in *The College and Clinical Record*, September, 1883, copied from the *Med and Surg Rep* August, 1883, the following case, reported by Dr F M Brundage, of Coningham, Pa. "Kate G, aged 70, was attacked in August, 1877, with pain in the right iliac region, and constipation. The cause was excessive indulgence in huckleberries. The symptoms had continued some time, and fluctuated. In the iliac fossa. In

four days an extensive opening formed in this swelling, and a large quantity of stinking pus and huckleberry seeds was discharged. On the seventh day, the finger was passed into the ilium, through the ilio-cæcal valve, and into the cæcum. Fæcal matter passed daily through the opening until it had nearly healed. Cicatrization was complete in eight weeks from my first visit.

Treatment—The patient was placed on her back, with the right side somewhat elevated and the right leg flexed. She was fastened in this position by straps. The diet was composed of bread and milk and beef-tea. The fistula was washed with carbolyzed water several times daily, and was dressed with charcoal poultice. The rectum was evacuated daily by the finger.

"After enjoying good health for five years from the date of my attendance (with the exception of a hernia in the neighborhood of the cicatrix, which formed in about one year), Mrs. G. succumbed to an attack of cholera morbus."

Considering the frequency of perityphilitis and the meager account of its different phases in our standard text-books upon the subject, together with the fact that many cases are overlooked or not properly understood by the busy practitioner, I have, therefore, in order to present the subject comprehensibly under the present state of medical knowledge, quoted largely from the foregoing papers without fear of trespassing upon the time and patience of the reader.

Although I had not seen Dr. Sands' article at the time I operated upon my patient, yet the operation was performed essentially in the manner as recommended by Dr. Parker and adopted by Dr. Sands.

I think it advisable, as recommended by Dr. Sands, "to insert the finger after opening the abscess, in order to ascertain the extent of its cavity, and detect, if possible, the presence of foreign bodies or fæcal concretions. These, if found, should be removed in order to avoid future trouble."

MEDICAL PROGRESS

MEDICINE

RHEUMATISM—Under this head the December number of the Proceedings of the Medical Society of the County of Kings has four distinct articles. Dr. Benj. Edson describes a case of the acute form treated by sodium salicylate grs. v every three hours, and relieved in two weeks time. It returned in a sub-acute form, and proved very obstinate, not being relieved by the sodium salicylate. Chorea developed, and the symptoms were finally subdued by *R. ext. cin. icifugæ fl.* ʒss , *potass. iodidi grs. v*, four times a day.

Dr. H. A. Fairbairn reviews the results of treatment of acute rheumatism, taking from the English journals the reports of between four and five hundred cases treated by salicin and salicylate of sodium, all being recorded hospital cases. The conclusions drawn are that they (these drugs) make comfortable an otherwise painful and distressing ordeal, that the duration of the disease, as a rule, is not shortened by

it, and the heart not protected, that it fails entirely in some cases. The dose varied from ʒiss to ʒij in divided doses (of sodium salicylate) during the twenty-four hours. By some ʒj doses were given every two hours or hourly, until relief was afforded. Accidents having occurred during its administration, and sudden death having followed, the recognition of the presence of a powerful drug, and the consequent care necessary in its use would seem to make this last dose a hazardous one. One observer recognizes a distinction between the natural and the artificial salicylic acid, the latter being made from carbolic acid, and likely to contain it in excess, ascribes the depression and other bad symptoms to this cause, the same symptoms would follow the administration of grs. vj of carbolic acid. This observer (Dr. Latham of England) has given the preparation derived from natural sources in 60, 70, and 110 grain doses, with no unfavorable symptoms except slight cerebral excitement. Dr. MacLagan prefers salicin in ʒi to ʒij doses hourly for six hours, then every two hours. In two cases given, improvement was marked in twenty-four hours, and the patients convalescent in four days. Salicin is preferred, as not producing depression, and therefore not prolonging convalescence. The drug must be given in large doses, so as to thoroughly saturate the system. The use of methyl salicylic acid, or oil of wintergreen, is reported in ten cases at St. Luke's Hospital, New York, as employed with good results in m. x to m. xv every two hours. Here Dr. Fairbairn makes a point of dwelling on the importance of looking to the activity of the eliminating organs when using such powerful drugs. The blister treatment, applied over the heart and about the joints, has sixty-four cases recorded to its credit as cutting short the fever, relieving pain, and having no heart complications. Dr. Fairbairn found relief given by large doses of the tincture of the chloride of iron in weak and anæmic cases, where neither the alkaline nor salicylate treatment appeared to do good. Dr. Craig, of Jersey City, reports benefit in forty-eight hours, and a cure in five to six days, from the use of the syrup of hydriodic acid in ʒij doses every two or three hours until relief, then ʒj three times daily. Dr. Flint, of New York, allowed a number of cases of acute rheumatism to pursue their course without any treatment. They all recovered, the mean duration of the disease being a little under twenty-six days. Our most approved method of treatment gives about the same average.

Dr. J. E. Richardson writes enthusiastically in favor of the treatment of acute rheumatism by the salicyl compounds, giving a brief analysis of thirty cases so treated. He used a freshly prepared solution of salicylic acid and bi-carbonate of sodium, with glycerine and water as a vehicle, so that each dessertspoonful represents ten grains of the salicylate of sodium, the carbonic acid evolved making the mixture more agreeable to the palate and stomach, this dose to be repeated every three hours, making eighty grains to the twenty-four hours. In several cases there was a decided cumulative effect, in but one, however, was this effect toxic. The former impurities of the drug as made from carbolic acid, have

now been reduced to the minimum, and it is as reliable as any made from oil of wintergreen. Local treatment by cotton wool and hot fomentations and the use of opiates, was not neglected. There was no hyperpyrexia in these cases, and in nearly fifty per cent the temperature did not exceed 102° . Subsidence of pyrexia occurred, on the average, 3.1 days. In fifteen cases it had become normal at the end of forty-eight hours. The average duration of joint pain was 4.5 days. The average time in which patients were kept under observation was 10.1 days, this being the time they were able to resume their employment. Heart complication occurred in one case, this was a case of endocarditis. He believes the salicyl treatment lessens the tendency to heart disease, probably through the reduction of temperature and the destruction of the rheumatic poison. Relapses took place in five cases while the patients were still under tolerably full doses of the drug. Dr Richardson draws the following conclusions:

1. The more acute the case the more marked the relief afforded by the salicyl compounds.

2. If beneficial effects are to result from the use of the drug, they should be observed within forty-eight hours.

3. If the remedy is administered early in the disease, and in not too large doses, the tendency to heart disease is greatly diminished.

Dr W. B. Chise, in considering the "Prophylaxis of Rheumatism," recognises first the direct transmission of the rheumatic diathesis, then its prevalence in the temperate zone and under the meteorological conditions of humidity with a low temperature. Consequently, his prophylaxis is introduced by directions of how best to avoid exposure, and the wearing of proper clothing, such as silks and woollens next to the skin. A proper care of the excretories, as bathing for the skin to keep the perspiratory glands in good working order, and attention to the urinary secretion, is dwelt upon. Alcoholic drinks are assumed to be a prolific cause of rheumatism, but in what way is not clearly defined. The undue formation of lactic acid in acute rheumatism is recognised as the cause of the hyperacidity of the secretions, and Bartholow's three types are given, viz. 1st, active, sthenic cases, in persons of robust health, youth or early adult life. Treatment Salicin and its compounds.

2d. Asthenic cases in the anæmic and debilitated, often the young. Treatment Tr. ferri chloridi.

3d. Obese persons and beer drinkers, with flabby muscles and acid indigestion. Treatment Alkalies.

Probably most persons of rheumatic antecedents will derive benefit, and thereby reduce the liabilities to its constitutional development, by more or less frequent use of natural alkaline and sulpho-alkaline waters. Buffalo lithia water is believed to exert a successful prophylaxis with some

MARSH MALLOW IN PAINFUL PSORIASIS.—Dr F. C. Berry records in the *Practitioner* that after trying in vain to relieve a typical case of psoriasis in a man 65 years of age, who had suffered from it for the past eighteen months, by the use of Fowler's solution in-

ternally, and the local application of soft soap, and an ointment of chrysophanic acid and vaseline, oil of cade and vaseline, the ammoniated mercury ointment, and Wright's liquor carbonis detergens, he turned his case over to an old woman who applied the marsh mallow ointment and relieved the intolerable itching and consequent irritation by the first application, and in a month the skin of the hand had almost regained its natural appearance. No other treatment was used except the washings with soft soap. The disease appeared again in a short time, but a fresh application of the ointment cured it at once.

In this case there was no history of syphilis. In the palm of the right hand the integument was hardened and thick, and from off its surface glistening white scales could easily be removed. In some places it was corrugated and fissured. Extension of the fingers would cause the cracks to bleed. The dorsal surface of the thumb was also affected. The ointment was made by cutting the fresh leaves into small pieces, stirring them together with lard and boiling the mixture for half an hour, after which process it is strained through muslin or through a common kitchen strainer, and is then ready for use.

TRANSFUSION OF BLOOD BY HYPODERMIC INJECTION.—Dr Paladini reports (*Gas Med Ital Prov Veneti*) an interesting case of successful injection of blood into the subcutaneous cellular tissue of the abdomen in a woman suffering from profuse menorrhagia. R. S., pluripara, aged 48, was reduced by menorrhagia to a profound degree of anæmia. On August 4, the loss was so great that the patient's state became most alarming. Transfusion of blood was urgently indicated. No apparatus for this being at hand, it was determined to inject the blood by means of an exploratory trocar and an ordinary syringe into the subcutaneous cellular tissue of the abdomen. The blood, taken from the husband's arm, was heated to prevent coagulation. The trocar was inserted about four fingers' breadth to the left of the umbilicus, and pushed well in so as to somewhat break up the meshes of the cellular tissue, and thus secure room for the blood to be injected. The stylet being withdrawn, an elastic tube was fastened to the end of the cannula, the blood was taken up by an ordinary metal syringe (about 90 cubic centimeters capacity), its nozzle being made fast to the elastic tube, and injected into the subcutaneous cellular tissue, where it appeared as a lump about the size of an egg. Two syringesful were thus injected. The patient felt no pain, and after two hours the swelling had entirely disappeared. No abscess or other ill effect followed, a slight ecchymosis only for a few days marking the site of the injection. On the next day the patient was much better, and began to take and retain nourishment and sleep well, for some days before there had been constant vomiting, and no sleep. The lax connective tissue lends itself admirably to the transfusion of blood, and to its rapid absorption. The quantity of blood might be easily increased by repeating the injection in two or three different places, to 300 or 400 grammes (about $10\frac{1}{2}$ or 14 ounces). This method is free from the dangers of venous or intra-peritoneal

transfusion, and is most easily done — *British Medical Journal*

AN EPIDEMIC OF ERGOTISM — The *Deutsche Med Zeitung* gives a detailed account of an epidemic which occurred in the autumn of 1879, in Ober Hesse, near Frankenberg, of which the *Medical Press* furnishes an extract. According to official returns 200 persons were attacked, but others say 500. The ergot was present in both rye and barley, and was computed to amount to 2 per cent of the bulk. The bread baked from the impure grain was dark, rather blue, and of a peculiar odor, rather sweet to the taste, but not disagreeable.

The first symptoms of poisoning appeared in children even after five days' use of the bread. Weakly persons were affected much more quickly and easily than those who were strong—the latter often retaining their health after months' use of impure bread. A prodromal stage was often observed of several weeks' duration, in which a general feeling of *malaise*, weakness, headache and giddiness were present. In these cases loss of appetite came on. In some cases this was replaced by ravid hunger. The temperature rose slightly in the evening. The pulse was soft and but little accelerated.

Cramps constituted a characteristic symptom, usually confined to the hands and feet, sometimes extending over the whole body, appearing early and disappearing late, involving the flexors of the fingers and toes and the extensors of the arms and thighs. The great toes were generally extended. Shortness of breath, pain in the pericardium and globus, indicated spasm of the diaphragm and œsophagus. Abortive cases ran from fourteen to twenty-one days, mild cases relapsed frequently. Severe cases frequently ended in epileptic attacks, in some as early as the eighth day. A few weeks later, psychical disturbances arose, viz. extreme restlessness, mania and stupor. Locomotor ataxia was always present, last in order of time. Sensibility undisturbed. Sole and skin reflexes were normal. The tendon reflexes were almost invariably absent, and some cases were observed where they had not returned after some years. The epidermis was raised in large blisters without inflammatory reaction, whilst, simultaneously, the patient frequently lost all the nails of the fingers and toes, and the hair of the scalp. Excretion of sweat was generally increased in the spasmodic stage, and milaria often made its appearance. Eczema and boils were also frequently observed, as well as urticaria. In the severe cases, menses previously normal, ceased at the commencement of the illness, and did not return till health was re-established. Dysmenorrhœa came on in the slighter cases. Notwithstanding the fact that pregnant women repeatedly suffered severely, no case of abortion was observed. The muscular contractions were considered as due to a centric cause.

SURGERY.

NEW MODE OF TREATMENT OF FISTULA IN ANO — Under this head, Dr John Roche, in the *Medical Press*, recounts the frequent unsatisfactory results of

the present modes of treating fistulæ, by stimulants, caustics, and the use of the knife. Dissatisfied with this condition of things, having to deal with several cases, and considering that division of the sphincter is not only unnecessary, but that its existence in its entirety should favor the healing process, if properly utilized, he treated his cases by keeping the bowels open with a sulphur and senna electuary, a teaspoonful every night, and directed that at each stool the patient should throw into the bowel some tepid water, in which was a little soap dissolved, and when the sitting was completed that the end of the bowel should be well washed with the same fluid. The fæces were, by this means, carried quickly and easily through the gut contiguous to the fistula, and there was the nearest thing to a safeguard against the foul discharge entering the internal opening of the fistula, were such to exist, or lying in a decomposing state so close to a sore as to prevent its healing. His anticipations were realized in every respect, and the cure seemed marvelous to him. In cases where there was considerable false membrane lining the fistula, he used lint shreds dipped in acetum cantharidis, as a stimulant, and refers to several cases so relieved.

OPHTHALMOLOGY AND OTOTOLOGY

A CASE OF CYSTICERCUS IN THE VITREOUS BODY — G Souquieres reports this case as occurring in the clinic of Prof Dor, (*Lyon Medical*). A young woman, 23 years of age, gave the history of noticing the appearance as of a cloud of dust, before her right eye, on getting up one morning. This cloud, however, was not sufficient to prevent her seeing minute objects. After continuing unchanged for eight or ten days, vision seemed to be gradually failing. In the daytime, *muscæ volitantes* were present. Medical advice was sought, and the condition considered as due to a nervous affection. A month later she saw a round, black spot, which was clearly defined, vision being more imperfect. In the darkness, and when she closed her eye, she noted a brilliant, fixed, and persistent point. At the end of two months the black spot had gradually become translucent from the center towards the periphery. At one point the patient observed a marked opacity, which elongated and shortened itself, and which she compared to a leech. By tapping the eye-ball she said she could displace the leech. Vision becoming more and more feeble, she sought the advice of M Dor, who found a cysticercus, adherent, as he supposed, to the inferior internal portion of the retina. On her second visit he found the cysticercus detached and floating in the vitreous humor. An operation was performed for its extraction, which resulted in the exit of a specimen of the cysticercus. There was no discharge of the vitreous humor, and but insignificant hæmorrhage. The resulting cicatricial tissue caused an opacity, and the retina was almost completely detached at that point.

THE PREVENTION OF BLINDNESS IN CHILDREN — The following excellent popular directions for the prevention of the frequent form of blindness arising from the destructive purulent ophthalmia of newly-

born infants, is being published and diffused by the Society for the Prevention of Blindness (England). "One of the most frequent causes of blindness is the inflammation of the eyes of new born babies, a disease which can be prevented and always cured. In almost all blind schools in England and on the Continent, a third, and even more, of the children's blindness is caused by the neglect and unsuitable treatment of this disease. In the Wilberforce School for the Blind at York it is said that out of 89 pupils, 37 are blind from this cause, and several eminent oculists state that half the blindness in Europe is due to this inflammation of the eyes of new-born babies. This frequent blindness is largely owing to the general ignorance of mothers, and to the unpardonable neglect of the midwives, nurses, and others who have charge of the infants in their earliest days. In many cases, these persons prevent resort to skilled medical assistance, in order to try some unsuitable domestic remedies, until it is too late, even by the most skillful treatment, to save the child's sight. Although the disease appears sometimes in a very mild form, it may still, without some suitable treatment, have an unfortunate issue, but, in most cases, the disease takes a more determined character, and then, if left to itself, it may develop with such rapidity that, in the course of a day or two, all hope for preventing blindness is lost. In general, newly-born babies seldom suffer from any other eye disease, and its first appearance is easily recognized by the redness, swelling and heat of the eye-lids, and by the discharge of a yellowish-white matter from the eyes. This dangerous and ruinous disease is always curable if treated at once. Immediately, on the first appearance of these symptoms, send for a medical man, and, until his arrival, proceed at once to keep the eyes as clean as possible by very frequently cleansing away the watery discharge. It is the discharge which does the mischief. The cleansing of the eye is best done in the following manner:

I Separate the eyelids with the finger and thumb, and wash out the matter by allowing a gentle stream of tepid or warm water to run between them from a piece of rag or cotton wool held two or three inches above the eyes.

II Then gently move the eyelids up and down in a circular way, to bring out the matter collected under them, wipe it, or wash it off in the same manner. This cleansing will take three or four minutes, and is to be repeated regularly, once every half hour at first, and later, if there is less discharge, every hour.

III It must be borne in mind that sight or blindness depends entirely in these cases on the greatest care and attention to cleanliness. Small pieces of rag or cotton wool are better than a sponge, as each rag is to be used only once, and should be burnt immediately, sponges should never be used except they are thrown away or burnt after each washing.

IV A little washed lard should be smeared along the edges of the eyelids occasionally, to prevent them from sticking.

V The eyes should not be covered by a bandage or handkerchief.

VI Fresh air and an equal temperature in the sick-room are absolutely required, and the eye, while suffering from the disease, should be kept carefully from all strong lights. Many cases of this disease might be entirely prevented by cleanliness of the eyes. (a) Immediately after the birth of the baby, and before anything else is done, the eyelids and all parts surrounding the eyes are to be wiped with a soft, dry, linen rag, afterwards, these parts must be washed with tepid water before any other part is touched. (b) Avoid exposing the baby to cold air; do not take it in the open air when cold, at any rate, dress the infant warmly and cover its head because cold is also one of the causes of this eye disease.—*British Medical Journal*

NEW INVENTIONS

THE LITHOPHONE.—This instrument was invented by James McKenzie Davidson, M.B., C.M., and is the result of his experiments with a rubber tube attached to the handle of a sound in an attempt to transmit the impression of the striking of the end of the sound against a calculus in the urinary bladder, to the ear. As described in the *Lancet*, the sound has a hollow cylindrical handle, open at the end like the mouth of a gun. The stem is of solid steel, and nickel plated, and does not differ from the short beaked sounds now in use. The handle is two inches and a quarter long, and hollow, with a diameter of half an inch. Externally, it has roughened longitudinal ridges, for convenience in manipulation. A piece of small and light India rubber tubing, about thirty inches long, is bent at one end, and the loop so formed is thrust into the tubular handle. The other end, fitted with an ivory or bone ear-piece (such as is used with the otoscope), is put into the ear, where it should remain fixed without requiring to be held. A binaural arrangement can be easily made of this, which would greatly intensify the note, and with it two persons can listen at the same time, and so verify the diagnosis with greater exactness. A modification of this is also given, in an egg-shaped bulb at the extremity, instead of the looped end, which barely exceeds half an inch in its widest diameter, and is squeezed into the tubular handle.

In its practical use, a particle of sand weighing less than $\frac{1}{1000}$ of a grain, lying on cotton wool, was detected by hearing its contact with the lithophone, and Alexander Agston, M.D., Professor of Surgery at the University of Aberdeen, gives the details of a case where a man was admitted to hospital suffering from bladder symptoms which pointed to the probable existence of a calculus. The use of the sound by the sense of touch did not detect the stone, but by the use of the lithophone its presence was apparent to every one. The stone was crushed by the lithopne, whose index gave it a diameter of three eighths of an inch.

THE
Journal of the American Medical Association.

PUBLISHED WEEKLY

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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—————
SATURDAY, DECEMBER 22, 1883
—————

INDEX MEDICUS

SHALL THE INDEX MEDICUS BE DISCONTINUED?—Five years' publication of the *Index Medicus* has proved conclusively

1 That the mere cost of production (per annum) is not less than \$5,000

2 That the maximum return from subscriptions at \$6 per annum has not exceeded \$3,600

3 That the increase of subscriptions during the past two years has been merely nominal

4 That the limited circulation permits no material return from advertisements

As the publisher agrees with the editors that—in justice to themselves as well as to those whose generosity has already been severely taxed—the *Index Medicus* must no longer be dependent on voluntary contributions, the undertaking must either be abandoned or at once be placed on the business footing of an equally shared support.

Since there are scarcely 600 subscribers to whom the *Index Medicus* is, or seems to be, a necessity, the question to be determined is whether there remains a sufficient number of subscribers who are willing to continue their subscription at the requisite increase of price.

The editorial preparations requiring an immediate decision, subscribers are urgently requested to respond without delay to the questions submitted below. I. LEVISONI, Publisher

December 1, 1883 31 and 32 Park Row New York

Question 1—If the future subscription price of the *Index Medicus* is fixed at \$10 per annum are you willing to renew your subscription for 1884 at that rate? 2—Should not 500 subscribers renew at \$10, will you be one of the 417 who are willing to renew at \$12?

The foregoing statements and pertinent questions have been received in the form of a circular from the publisher of the *Index Medicus*, and are of sufficient importance to justify a careful consideration on the part of all our readers.

That the *Index* is a work of great value to all members of the profession who desire to know what is being published in the various departments of medicine, and where to find what is written on each important subject, there can be no doubt. To medical teachers and writers it is doubly important. It is a work that would be of much value to all such medical societies and institutions as are sustaining libraries, and are desirous of having early information concerning the contents of all new books, monographs, pamphlets, etc. Its publication during the last five years has not only done great credit to both editors and publisher, but has also added much to the credit of American medical literature on both sides of the Atlantic. The actual annual cost of producing the *Index Medicus*, as appears from the above statement, is about \$5,000, which at the present subscription price, \$6 per annum, would require only 834 subscribers, or an increase of 250 over the present list. More than this number should be immediately subscribed for the use of medical societies alone. The Chicago Medical Society has recently appropriated \$500 for the purchase of books and periodicals to furnish a medical section or department in the Chicago Public Library. We trust the able committee having charge of the expenditure of the money will not omit the *Index* from its list of purchases. Like the Library and Museum of the Surgeon General's office in Washington, the *Index Medicus* has become, in some degree, national in its character, and should command a feeling of national pride and active interest in its support. At all events, let the questions asked by the publisher be promptly considered in such a way as to double the present patronage of the *Index* and thereby secure its permanence, with some remuneration for the labor required for its preparation.

ORIGINAL INVESTIGATIONS.—In the JOURNAL of last week (No. 23) was completed the essay of Dr. A. T. Keyt, of Cincinnati, Ohio, embodying the results of a most ingenious and extensive series of experimental investigations concerning the relations of cardiac action to pulse-wave velocity, cardio-aortic interval, etc., and the modifying effects of both stenosis and insufficiency at the mitral and aortic openings. If the three chapters are read together, it will be found that they embody the results of one of the most ingeniously conceived, patiently executed and logically considered series of experimental investigations concerning important physiological and pathological processes that has appeared in this or any other country during the last decade. All parts of the essay are copiously illustrated by cuts giving the actual

sphygmographic tracings and time markings, with remarkable accuracy. The more carefully and thoughtfully the essay is read, the more will its intrinsic value and interest be appreciated.

MEDICAL SERVICES TO TOWN OR COUNTY POOR, AND ETHICS—Twice, recently, we have received communications complaining of the injustice of a system long in vogue in perhaps most of the States, by which the town and county authorities annually offer the privilege of serving the sick poor under the charge of the town or county, to the lowest bidder, on the same principle that they invite bids for provisions and clothing. In one of the recent cases brought to our notice, a board of county supervisors, after receiving bids from some half dozen doctors, some of them ridiculously low, awarded the contract to one of the number whose bid was higher than two or three others, thereby violating the very principle of the law under which they claimed to act. The other is from an esteemed correspondent at Tecumseh, Michigan, who says "In the county of ———, State of Michigan, within thirty miles of its university, the worthy rulers of said county (supervisors) let out the job of medical attendance upon the poor to the lowest bidder in each town, village and township. The town of ———, in this county, has almost three thousand inhabitants. The contract physician for the poor, who, by the way, has practiced medicine in the town for thirty years, receives \$19.50 per year for medical attendance, and furnishes medicine. If no bids were made, the supervisors would allow each physician half fees for whatever business he might do among the poor of the towns. Now, Mr. Editor, is there anything in the above asinine transaction contrary to the National Code of Ethics? or is it in accordance with the 'go as you please' code, of New York? Please give us some light."

We presume our correspondent, as well as most of our readers, knows that the National Code of Ethics makes no direct allusion to what is termed contract practice, either in regard to contracts with families, institutions, or corporations of any kind. But in enjoining it as "a point of honor to adhere" to such rate of charging for professional services as may be adopted by the profession in any given locality, it of course indirectly prohibits all special contracts with families or institutions capable of paying for ordinary professional services. The clause in the Code which refers most directly to bestowal of professional services on public institutions is as follows: "Poverty, professional brotherhood, and certain duties of the first sect

should always be recognized as presenting valid claims for gratuitous services, but neither institutions endowed by the public or by rich individuals, societies for mutual benefit, for the insurance of lives or for analogous purposes, nor any profession or occupation, can be admitted to possess such privilege. But to individuals in indigent circumstances, such professional services should always be cheerfully and freely accorded."

It would appear from the last clause quoted, as well as from some other clauses in the Code, that it is the *duty* of every practitioner, so far as his time and health will permit, to respond freely and cheerfully to the calls of all such individuals as are sick and actually too poor to pay for services. Consequently, any contract stipulating for the payment of fees for services to such poor individuals, is contrary to the plain inculcations of the Code. If the authorities of a town, county or city, seeing an unreasonable burden cast upon a physician or surgeon through protracted services to certain poor individuals or families, should voluntarily offer some pecuniary reward, either from the public treasury or private resources, it may be accepted without hesitation. And we have known such compensations to be made more than once. But when paupers are actually taken charge of and gathered into "poor-houses" or other institutions supported either by public taxation or private charity, many considerations render it desirable to have the services of some one regular medical attendant, and yet it would be unreasonable to expect any one physician to hold himself in readiness to answer gratuitously all the calls that might come from a "poor-house" containing several hundred paupers. Such institutions cannot be ranked with those spoken of in the Code of Ethics as "endowed by the public or by rich individuals," but are by common consent classed as eleemosynary or charitable in character. And so far as any ethical question is concerned, a physician or surgeon could bestow his services upon the pauper inmates as gratuitously as upon any other "indigent individuals" outside of such institutions. But both justice and a wise public policy clearly demand that when public officers, whether supervisors of towns, commissioners of counties, or the municipal officers of cities, take charge of paupers and assume to provide for them out of the public treasury, they should from the same treasury make reasonable compensation for such medical services as their helpless wards may need. Every physician pays his share of the public taxes by which the public treasury is replenished. There is no more reason why he should give his services gratuitously to paupers supported

from that treasury, than should the supervisor, the county commissioner, or any other citizen. Indeed, the correctness of the principle of action here claimed is everywhere conceded. But the important practical question remains, How shall the rate of compensation for medical services rendered to poor persons under charge of public authorities be regulated? Certainly not by farming out the service to the lowest bidder, as you would the privilege of furnishing meat, corn or clothing. First, because meat, corn, clothing, etc., are material products having a market value below which dealers in them will not bid. But professional services are not materials, the market value of which will necessitate a minimum limit below which the bidders cannot go. The qualifications and skill of a medical man or doctor, unfortunately have no definite legal measure or weight, like a bushel of corn or a pound of meat. It is easy to see, therefore, that a superannuated doctor, whose age and infirmities are such that the paying part of the community give him very little to do, could afford to bid for the town pauper patronage at a very low figure. So, too, the young doctor just from the college which had given him a diploma after *eighteen months* of medical study, and attendance on two courses of lectures given on *beneficiary* tickets or scholarships. As his qualifications have cost but little either in time, money or mental discipline, and he has plenty of unoccupied time to spare, why should he not compete successfully by underbidding even the *old* doctor who attends to the medical wants of all the paupers in a population of 3,000, for \$19 50 per year, and furnishes the medicines besides?

Then, there are a great variety of "doctors" who never saw the inside of a medical college—not even on a free ticket—who could easily underbid the young graduate just alluded to. We need not go further in illustrating the injustice to the sick poor and the unfairness to the profession involved in the common practice of accepting the services of the lowest bidder. Instead of such system, it is plainly the duty of all public officers having charge of poor-houses, or other institutions accommodating the sick at the public expense, to fix a moderate rate of compensation for such medical services as might be called for, whether rendered by one doctor or a dozen, thereby making the aggregate amount paid depend upon the actual amount of services rendered, which is the most correct and honorable rule for all parties. And if members of the profession would everywhere totally refuse to accept the invitations of city, town and county officers to bid for the pauper service, and at the same time actively exert their influence with the

municipal and legislative authorities in favor of the more honorable and just method just indicated, it would require but very few years to cause its general adoption.

AN ERROR CORRECTED.—In the JOURNAL of December 8, (No 22) page 655, in the review of the Report of the State Board of Health of Kentucky, the words "Dr Holland being unversed in practical chemical analysis," should read, "Dr Holland being versed in practical chemical analysis," etc. The reference is to Prof J W Holland, of Louisville, Ky, who, for a number of years, was a teacher of chemistry, and is thoroughly informed in all its branches.

NUMBER SEVEN.—Several weeks since we found our supply of the *seventh* number of this journal insufficient to meet the demands of new subscribers who desired all the back numbers. The defect will be remedied in a few days, when the missing number will be sent to all who are entitled to it.

NEWS ITEMS

MONUMENT TO PINEL.—In consequence of the memorial of the Medico-Psychological Society of Paris the Municipal Council have commissioned M. Ludovic Durand to execute a statue of Pinel, which will be erected on the Place Pinel, near the Hopital de la Salpetriere. The design represents Pinel standing before a young girl, from whom he has struck off the chains binding her, the barbarous implement being in his hand.

HOW OUR MEDICAL BRETHERN ABROAD REGARD US.—It is astonishing in the present age to contemplate how rapid is the diffusion of knowledge. We receive medical periodicals published in Europe, to find that articles and cases published, as it would seem, only yesterday, have been reprinted and commented on, coming back to us sometimes in a foreign language which makes them read very oddly. But that is not all—our newspapers too receive the same attention, and the *Med Times and Gazette* for Nov 17 quotes from two Buffalo papers which give the details of two hospital cases, one of an amputation, and the other of a case of skin-grafting as performed by Dr Roswell Park, at the same time that they give great praise to the operator and his qualifications. To be sure, in making these extracts, the editor seems disposed to be sarcastic in his comments, and the impression given is not of the most favorable kind.

Perhaps it is the diffusion of this kind of knowledge that has led a Dublin hospital surgeon, as referred to in the *Medical Press*, Nov 14, to decide to spend the winter in San Francisco. The *Medical Press* tells us that he gave out the impression that he was to reside

permanently in this country, and consequently obtained numerous testimonials as to his capacity for surgical practice, from surgeons of eminence in Dublin. On leaving Dublin, this surgeon issued a lithographed circular to his patients, recommending a certain medical man by name to take charge of them, as he would continue the line of treatment hitherto pursued, and maintain a constant correspondence with San Francisco respecting the progress and treatment of the patients transferred to him. The *Medical Press* criticises severely this circular, and the fact of obtaining testimonials for a temporary absence, which was understood to be meant to be permanent.

SOCIETY PROCEEDINGS

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY

[Section for Clinical Medicine Pathology and Hygiene.]

ALBERT N. BODGETT, M.D., SECRETARY

November 14, 1883. Meeting called to order at 8 o'clock by Dr. George B. Shattuck, Chairman.

Dr. H. I. Bowditch requested the privilege of occupying a few moments for the purpose of warning the profession against a band of medical tramps, which at present infests Boston and its suburbs, and by every expedient endeavors to extract pecuniary aid from physicians. One of these impostors has suffered an amputation of the thigh, wears an artificial limb, professes to be a graduate of Harvard and the son of a physician, and presents plausible testimonials recommending him to the profession. The letters of commendation were found by Dr. Bowditch to be forgeries, and the man himself is a swindler. Another member of this band of conspirators is a young man, who is elaborately dressed and makes a favorable appearance, and whose habit is to call at the physician's house when the doctor is away. He represents himself to be the son of a celebrated physician of New York, who is a very intimate friend of the physician at whose door the young man is standing. He further states that he has been robbed of all his money and desires to borrow a sum, generally from three to five dollars, to aid him in reaching his home. Upon being informed that the doctor is not at home his eyes fill with tears and he appears to be in great distress of mind, and at length seeks to borrow the sum required of the person who comes to the door. If he does not succeed in this ruse, he asks the time at which the doctor will return, and is very particular *not* to return at that time. Another is a man of swarthy complexion, who pretends to be from India, but is probably an arrant cheat.

The regular business of the evening was then taken up. The first matter was the election of a chairman for the ensuing year, the present incumbent, Dr. G. B. Shattuck, who has filled this office for two years, having positively declined a reelection. On motion of Dr. R. M. Hodges, seconded by Dr. A. L. Mason, the name of Dr. R. T. Edes was proposed, and he was unanimously elected. As Dr. Edes was not present,

the Secretary was directed to acquaint him with the action of the Section.

Dr. G. H. Lyman then presented the first paper of the evening, entitled

TINNITUS AURIVM AND VERTIGO AS PROMINENT SYMPTOMS OF LITHÆMIA

This was followed by a paper presented by Dr. I. J. Putnam, entitled

RECENT VIEWS CONCERNING THE DIAGNOSIS AND TREATMENT OF LITHÆMIA

The Chairman alluded to the thoroughness with which the ground was covered by the two readers, and hoped that the discussion of the subject would be full and complete. The subject was then placed before the meeting.

Dr. S. G. Webber said that he had been very deeply interested in both the papers, but wished that in addition to the opinion of so many distinguished authors Dr. Putnam had given us his own views upon lithæmia at greater length. From his review we must conclude that we really know very little upon the subject, even observers, who have devoted much time to the study of the questions involved, have changed their views within the last few years, and now hold opinions quite different or the reverse of their former opinions.

Two symptoms have not been mentioned in these papers, which are not so frequent, perhaps, as the others, but are yet of interest,—irritability of temper, or a change of disposition, this may be only an accidental coincidence depending in part upon the annoyance and discomfort caused by the other symptoms, perhaps, however, it may be due to the deficient nutrition of the brain. These patients are often much more disturbed at certain times in the day than at others, are excitable, and sometimes violent. Another symptom is temporary deafness, which may last only a few hours.

The diagnosis between lithæmia and other nervous affections is by no means always easy. Two conditions or diseases may be thought to be present, namely, tumor of the brain and epilepsy, when there is only lithæmia. A patient with headache, tinnitus, vertigo, change of disposition and languor, may be suspected of having a tumor, even a careful examination may not satisfactorily clear up the doubt, and it would be necessary to wait for time to show the truth by the development of other symptoms, or by the recovery of the patient.

Vertigo, even without loss of consciousness raises a suspicion of epilepsy, when several attacks occur near each other, and then again after a long interval another series of attacks, the resemblance is quite close. As a rule, in lithæmia consciousness is not lost, in epilepsy consciousness is usually lost in some of the attacks though exceptionally these partial attacks may precede by several months or years the fully developed *grand mal*. In lithæmic vertigo the bromides, which usually lessen the number and severity of the epileptic attacks, have little or no influence for good. Yet it is necessary to guard against an apparent benefit which would be deceptive if the bromides were given at about the time of a natural remission in the

symptoms the drug might seem to be of benefit. Time would show the error.

We probably need to pay more attention to the character of the urine in all doubtful cases.

Dr David Hunt remarked that this discussion has suggested the relation of the science of medicine to the art of medicine, our history proves that the attempts to use pure hypotheses as foundations upon which to build methods of practice have obstructed the progress of the art of medicine, in the present instance we have no definite knowledge of the formation of urea and of the conditions in which it exists in the blood, such being the case we are very skeptical as to the advantage of adopting the name "lithæmia" as descriptive of a morbid condition for which a special therapeutics is adopted.

If lithæmia is to be considered as a form of larvaceous gout, we must also acknowledge that since Sydenham's day we have added nothing to his description of gout but the name "urea," yet he has said nothing of tinnitus aurium as a symptom of this or of any other form of the disorder, it is suggestive to observe how little such a clinical artist as Rousseau has been able to add to Sydenham's description, and that he, too, has had nothing to say of tinnitus, as far as therapeutics are concerned it is noticeable also that the alkaline cathartics, so advantageously employed in lithæmia, are just the remedies which Rousseau has wained against as so dangerous in larvaceous gout.

If the blood-poisoning in this condition is to be accepted as the specific cause of the irritation of the auditory nerve, is it not surprising that we hear so little of tinnitus in Bright's Disease, excepting in those cases where we get direct, local causes in the catarrhal affections which accompany it? We know that anæmia causes irritability of this and other nerves, we know that closure of the Eustachian tubes, spasm of the tensor tympani and stapedius muscles, and various disorders, by direct and by reflex action upon the rich nerve supply of the middle ear, cause this symptom, having founded our knowledge upon so much of fact, we hold that it is not good practice to introduce into this department of knowledge a hypothesis founded not only upon no certain knowledge, but also upon no well-known analogy. Aurists, in the vast majority of cases of persistent tinnitus, are able to demonstrate the cause in some local disease, other objective causes no doubt remain to be discovered, but a theory of "lithæmia" is in no way calculated to aid the search. Let us recall the time when every "blepharitis" was "scrofulous," or "gouty," or something else, and then think of the condition to day, when, as every oculist knows, nine-tenths of the cases of blepharitis are caused by the lack of proper glasses, and ask ourselves if these specious but baseless hypotheses have ever advanced the art of medicine. As long as they kept us from the path which Donders, Von Graefe, and Helmholtz have followed, they not only kept us from the best in art, but they constantly opposed the application of the methods of science, so in this matter a "lithæmic" tinnitus or vertigo, without adding anything to our practical success,

will stand in the way of that careful objective study by which Hebra has made modern dermatology what it is, and to which modern science is continually directing the student of medicine.

Dr Blake thought that the tinnitus aurium, like pain, might be regarded as a physical conscience, too valuable as a symptom to be ignored or put aside with superficial investigation, and that in weighing it as a symptom, due regard should be had to the character of the tinnitus and its origin. Subjective noises in the ear may be, for instance, either of extrinsic or intrinsic origin. Under the former head being included noises resulting from foreign bodies in the external canal, as of hair impinging upon the membrana tympani, movement of fluid in the middle ear, sounds resulting from contraction of the muscles, changes in tension of the membrana tympani, and in the condition of the Eustachian tube, and the like, while under the head of intrinsic causes may be classed, for the purpose of distinction, the various circulatory murmurs and other sounds, more distinctly musical as a rule, which indicate some irritation of the auditory nerve.

In regard to the cases described by Dr Lyman, the intrinsic cause of the tinnitus may be masked by the existence of a thickening of the mucous membrane of the middle ear, in itself sufficient apparently to account for the subjective sound, in this case a circulatory murmur, the same obstruction in the middle ear which prevents sound from passing inward preventing this sound from passing outward, for, as Dr Draper says, in cases of gouty habit there is both an irritation and inflammation of the mucous membrane and a vessel dilatation, the former favors a progressive thickening of the mucous membrane of the middle ear, the latter, when it occurs in the ear, furnishes an increased circulatory murmur.

To treat the local trouble of the middle ear only, under such circumstances, is of course a mistake, it is equally a mistake to leave the ear out of consideration altogether and to refer the aural symptom under consideration to general causes alone.

Dr R H Fitz said that he agreed entirely with the views presented by Dr Putnam, which contain the opinions of the most recent writers upon lithæmia in its various forms and phases. It is still true, however, as Dr Hunt has stated, that we as yet know but very little about the essential character of the disease, of which we are obliged to judge from a complex and often a contradictory array of symptoms. Most cases in actual practice are best treated by attention to the underlying dyspepsia. In that variety of this disease represented by neurasthenia the patients sometimes lose flesh and grow worse at the same time, though this is far from being the rule. In the dietary of lithæmia each individual patient must find out by experiment and experience what things he can take, and what he must avoid.

Dr C F Folsom stated that he had seen such cases, and that he had arrived at conclusions regarding them similar to those of Dr Putnam. Dr Folsom does not feel at all sure of the pathology of these cases, but treats them all on the same general principle. He mentioned a case occurring in a lady in

which tinnitus had been the prominent symptom, and had subsided under tonic treatment. During some years no symptoms of lithæmia were observed, when suddenly, last summer, an attack of gout supervened.

Dr G. L. Walton remarked that in many instances there is no ascertainable objective cause for subjective sensations of hearing. The amount of distress occasioned by the noise in the ear varies greatly according to the momentary state of mind which the patient may for the time be in, so that a uniform degree of irritation will awaken a very variable and uncertain amount of reaction or response, sometimes to a degree in no way corresponding to the intensity of the cause, and frequently to a degree far in excess of the normal reaction to the cause. We see this illustrated in the ordinary events of daily practice, as when, for example, one patient cannot obtain sleep if a clock be ticking in the room, while another patient may find the silence of the night oppressive from its unbroken stillness, and may absolutely require the aid and companionship of a noisy mechanical device of wheels and bell, weight and pendulum, in order to procure quiet and refreshing slumber. The symptoms at different times are variable while the cause

calling attention to the results of the treatment in supporting the diagnosis in the case reported. Many cases, however, are observed in which tinnitus and vertigo occur, one or both, and which may undoubtedly be regarded simply as cases of indurition. When we attempt to group all these cases under the head of lithæmia we should not allow the name to deceive us as to the extent of our knowledge in regard to them.

DOMESTIC CORRESPONDENCE

LETTER FROM INDIANAPOLIS, INDIANA.

MR. EDITOR.—The two medical colleges (regular) of this city opened the session of 1883-4 in September last, the Medical College of Indiana with fifty students, and the Central College of Physicians and Surgeons with twenty. The average attendance during the year at the former is 100, the latter fifty. Both the schools now require a preliminary examination of students before admission to the course of lectures. This is the first step in the line of pro-

Ours is Luther Dana Waterman. He was known to his fellows as capable of fairly expressing himself in prose, but that he would be guilty of poetic effusion was not suspected. He appeared suddenly, like a bright new star in the cluster of American muses. His first offering is an edition of ninety-five detached philosophical assertions in blank verse. It enables us to present another example showing that the study and practice of medicine need not, of necessity, make a "one idea" man.

The Marion County Medical Society meets each Tuesday evening, at Indianapolis. Formerly, the physicians of the city alone were members of a local medical society named the "Indianapolis Academy of Medicine." But since the change in the organization of the State Medical Society, county societies have taken the place of other local bodies of this nature, the State Society being composed of delegates from county societies. Thus Indiana has as perfect a system of organized medical bodies as can be found in the Union.

The subject of "Code" and "anti-Code" sometimes disturbs the usual harmony existing among the members, they forgetting that the "Code" was made by the "fathers" in the American Medical Association, and that it must be upheld or changed by them alone.

During the past few weeks valuable articles have been presented to and considered by this Society, upon the subjects of "Malaria," "The Proper Status of Chemical Analysis of Potable Water," "Puerperal Fever," "Gun Shot Wounds," etc.

In discussing the subject of "Potable Water Supply," it was conceded that the use of "dug" wells as such a source of supply should be abandoned, at least in cities and towns, and that "tubed" wells, driven to the second or third stream or strata of water, furnished a pure, wholesome supply, and that cisterns containing rain water, purified by passing through hard brick or porous stone, were also a safe and convenient source of supply. It is idle to rely upon chemical analysis alone to determine the wholesome character of potable water. This truth is fully shown by the report of Dr. Mallet to the National Board of Health, and recorded in Transactions of the American Public Health Association of 1882. The easily understood rules as to the proper water supply, as above given, will solve the problem as to purity, except in cases where water-works demand a larger supply for consumers. But in this case all streams receiving sewage should be avoided.

The subject of puerperal fever was brought before the Society by a case reported by Dr. Jeffries. Death occurred within 12 days after delivery. The inefficiency of continued large doses of quinine to reduce, in any great degree, the abnormal temperature in this case was fully shown. A slight laceration at the os uteri was found, and in the discussion of the case it was held by a portion of the members that through this "door-way" the septic material gained access, and this was the cause of the trouble. The history of the case, however, developed the fact that there had been, for some cause, a lack of a proper contraction of the uterus, so that the clotted blood,

etc., had not been sufficiently expelled, but remained undergoing changes that might cause all of the constitutional trouble. The question of washing out the uterus with simple or medicated water was discussed, and the broad assertion made that as a preventive measure, the uterus in all cases of child-birth, should be treated in this manner. This was properly questioned by others who clearly recognized that nature, by immediate and firm contraction, expelled what ought to be cast off, that the washing out of a normal, healthy-acting uterus directly after child-birth would be properly classed as "meddlesome midwifery," while it might be called for when nature or the medical attendant should fail to obtain the normal contraction of the organ.

At the meeting of the Society, Nov. 6, 1883, Dr. F. N. Bryan reported a case of early abortion. In the discussion of this case an interesting question in medical jurisprudence was brought up, viz. How long a time could elapse after rupture of the membranes before the abortion would take place? The subject involved had, at one time, been before the courts in the case of a practitioner charged with committing criminal abortion. Some of the experts held that in case the membranes were ruptured, abortion would take place within 24 hours in all cases, and upon this testimony the physician was cleared of the charge.

The question was answered in this discussion by Dr. Harvey, who stated that three or four days, or as many weeks, might elapse after the rupture of the membranes before abortion occurred. And he reported two cases where, in the first, two, and in the second three weeks elapsed after rupture of the membranes before the foetus was expelled.

In your journal of October 13, there appears a notice relating to "training nurses," as recommended by Prof. Gross, at the last session of the American Medical Association. The appreciation of the wisdom of such suggestion has been shown by the action taken at many points, to establish suitable provisions for the proper education and training of nurses. At Indianapolis steps have been taken for this purpose, the "school" being in connection with the City Hospital, and the gentlemen connected with both medical colleges acting as teachers. A suitable number of female teachers has also been secured. This is certainly one of the most sensible movements that have been inaugurated, and, if rightly carried out, will provide the means of furnishing comfort to the sick, and greatly aid in preventing disease. Whether women are suited for surgeons or general practitioners of medicine may be an open question, but the lives of Madame Bovine, La Chapelle, and others, decide the question as to their fitness as *accoucheurs*. That they are the best of nurses, when properly educated and trained, cannot be questioned.

The public health work in Indiana progresses slowly, it may be that this is best, so that calm experience may have its perfect work. The work in this State was brought into existence through much suffering, and, in its infancy, was cradled as in a tempestuous sea, may it prove a child Hercules that, by reason of its strength, may survive its early foes.

Several bills for the "regulation of the practice of medicine" have been before the State Legislature each session since that of 1878-9. Some were good and some very poor. Experience has taught that while a law that required only a preliminary examination before the entrance of a student into college, and an examination by a competent Board of those who do not possess a diploma, is capable, by good management, of doing much good, still the only certain prevention of the flooding of the country with incompetent practitioners will be found in requiring an examination, by a Board wholly separate from a college faculty, of *all* who desire to enter the practice of medicine. In addition, a diploma should be first required. Only by way of such an impartial examination will medical colleges be incited to proper care and diligence, and the ranks of the profession be purified.

The composition of such a "Board of Examiners" is of some importance. In some of the States, the State Board of Health is given the powers of such an examining board. We think this is impolitic, if for no other reason than that a board of health will always have its hands full in attending properly to the health department of State Medicine, while it is as much as any body of men is able to do in a proper manner, to regulate the practice of medicine in their State. It is certain that wherever the work connected with public health is sought to be controlled, that also the depredations of incompetent or dishonest practitioners should be prevented. But it is as certain that wherever both duties are delegated to the same Board, there is a risk of having one or the other of the works slighted. By good luck such a combination may for a time, succeed in doing much good. But it is impossible that anything like perfect work shall be done, unless the organizations are separate. Yours truly, THAD M. STEVENS

LETTER FROM WASHINGTON.

The regular bi-weekly meeting of the Biological Society was held on Friday, Nov. 30, when Dr. Frank Baker read a paper entitled, "The Natural Study of Anatomy."

Dr. Baker's paper was an exposition of the faults of method in the ordinary English text-books of anatomy, with suggestions toward a remedy. The anatomy of the text-books is too mechanical and hardly deserves the name of science, there being no attempt to gradually unfold and develop the subject, as in other sciences. Without preliminary notions the student is plunged at once into the dry details of a geometric description of surfaces and their relations, all interest of practical application or of intelligent comprehension of the meaning of what is disclosed by dissection being suppressed. The alliance between anatomy and physiology is indissoluble, a certain violence being done to either science when its twin is suppressed. This should be kept in view, and function brought forward as establishing structure and slowly changing it.

This method may be applied in three ways: 1st, as illustrating the immediate connection between

structure and function, to which belong practical applications of anatomy, which should always be used to illustrate and impress upon the learner the necessity for mastering the dry details; 2d, the correct use of embryology and histology as illustrating the gradual formation and simplest elements of the body, the great advantage of this being that it proceeds from simple to complex. Illustrations were given of the ease with which complicated structures could be explained by this means, the examples being the joints, the temporal bone, the vascular system and the brain.

Instead of placing embryology and histology as separate sections, there should be a few chapters giving the general development of the body and the epithelial and connective tissue structures, the development and structure of separate organs preceding always the description of those organs. Only general outlines to be given, not superseding elaborate *treatises on these subjects*.

3rd, the moderate use of comparative anatomy, both as throwing light on the real nature of human structures, and as affording by points of contrast means for retaining their details firmly in mind.

The whole work should be preceded by an outline of the accepted parts of the theory of descent with modification especially, heredity, variation, differentiation and division of labor.

A short review was given of the various works on anatomy in English, French and German, the last being considered the best, especially the new work of Gegenbaur, which, as a purely scientific treatise, was the best extant, but should be adapted for general use by additional matter on topographical, surgical and applied anatomy.

The paper elicited considerable discussion, two of the physicians present holding that since the present system had been long and severely tried, it was the best that could be devised, that the one proposed had not only the sin of novelty, it was clumsy, irregular, and too extended for practical use.

The biologists present seemed to be unanimously of the opinion that the method proposed was undoubtedly an improvement, and the one which all sound science showed to be correct. A knowledge of names is not so important as a knowledge of the nature of the structures, which cannot be obtained by the old method. Prof. Cope stated that the method proposed had been employed for some years by Prof. Leidy, of the University of Pennsylvania, and had not been found cumbersome, but was, on the contrary, feasible and satisfactory. Prof. Riley was shocked to find text-books on human anatomy so far behind the demands of modern biological science. It seemed the general opinion of the biologists that a method which had been applied with signal advantage to other branches of the biological tree could not fail of good results when used in human anatomy.

NECROLOGY

MONTGOMERY, JOSEPH FAUNTLEROY, M D, of Sacramento, Cal., was born in Nelson county, Va., Nov. 15, 1812, died suddenly in his office where he lodged, in Sacramento, Oct 6th, 1883. He was the son of Joseph and Jane (Woods) Montgomery, of Irish descent. Having secured a good English and a fair classical education, he began the study of medicine, attending the University of Virginia. He graduated M D in 1833, and the following year took a course of lectures at the University of Pennsylvania, where he graduated in 1834. Dr Montgomery wrote his thesis on Chlorine. Returning to his native county he began practice, but in 1836 removed to Jackson, Miss., where he remained until 1842, when he returned to Nelson Co. He was among the earliest emigrants to California, and settled permanently in Sacramento in 1850, and was among the oldest medical practitioners in California. He was a man fond of study, with an ardent love for his profession, and well informed on all the leading questions of the day. He was one of the original members of the Sacramento Medical Society for Medical Improvement, and its Vice-President in 1859 and again in 1871, and President in 1874. A member of the California State Medical Society, in which he has filled acceptably most of its offices, and long Chairman of the Standing Committee. Since 1870 he has been a member of the State Board of Health. He was one of the original members of the Board of Medical Examiners, and served for a number of years. He became a member of the American Medical Association in 1871.

Dr Montgomery was a skillful surgeon as well as a good general practitioner. Many of his surgical operations were quite notable, and some of them have been reported in the journals. His more important contributions to medical literature may be found in the Transactions of the societies to which he belonged, and in the current medical periodicals. The following papers have attracted some attention: "Burns and Scalds," "Treatment of Typhoid Fever," "Fracture of the Inferior Maxillary Bone, with New Apparatus for Treatment," "Adulteration of Food, Drinks and Drugs," "Reports on Medical Education," "Public Hygiene and State Medicine." Dr Montgomery was never married, and leaves no known relations in California. His professional life is amply referred to in the November number of the *Pacific Journal*.

J M I

MISCELLANEOUS

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM DECEMBER 7, 1883, TO DECEMBER 14, 1883.

Shufeldt, Robert W., Captain and Assistant Surgeon now on sick leave, relieved from duty in the Department of the East and assigned to temporary duty in the office of the Surgeon General of the Army (Par 12, S O 284, A G O, December 12, 1883).

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING DECEMBER 15, 1883.

Surgeon T M Dearborne, placed on the retired list from December 10.

P A Surgeon A C Heflinger, in addition to his duties at the Navy Yard, ordered to attend officers at Portsmouth, N H.

NEW BOOKS.

Kuchen J M W Students' Manual of Diseases of the Nose and Throat New York G P Putnam's Sons, 1883 6 p 127 p il cl \$1 00

Archiv f Psychiatrie u Nervenkrankheiten 174 Bd 4 ft Berlin, Hirschwald

Frick, Dr Carl Frdr Die Diphtheritis od Rachenbraune, Populär Besprochen 8vo 95 pp Q Aufl Wolmirstedt

Friedrich V Diphtheritis u Deren Erfolgreiche Behandlung Nach 10jähriger Bewährter Heilmethode 8vo 34 pp Neunred Heusers Verl

John, Prof Dr Üb Athmung, Athmungsstirft u Iustverderbniss Berlin, Parey

Klinik, Wiener Vorträge aus der Gesamten Prakt Heilkunde 10 Hft Wien Urban & Schwarzenberg

Kommann, San R Dr Ernst Lehrbuch der Geburtshilfe f Ärzte u Studierende Mit 106 Holzsehn 8vo VI, 538 pp Gubben, Laupp

Kuhnt, Prof Dr Herm Beiträge zur Operativen Angeneil kunde Mit 12 Holzsehn 8vo V 97 pp Jena, Fischer

Kustner, Prof Dr Otto Beiträge zur Lehre der Endometri tis Mit 2 lith 7 af Imp 4to 64 pp Jena, Fischer

Langer, Hofr Prof Dr Carl Anatomie der Ausseren Formen d Menschlichen Hoders Mit 120 Holzsehn 8vo XII, 296 pp Wien Toeplitz & Deuticke

Medicinal Kalender Deutscher 16mo VIII, 192, 123 und 111, 114 pp Erlangen Berold für den Preussischen Staat 12mo V 369 u LXVII, 454 pp Berlin, Hirschwald

Niemeyer, Weil Prof Dr Fel V Lehrbuch der Speciellen Pathologie u Therapie u s w II Veränd u Verm Anfl I Bd 8vo VIII, 878 pp Berlin, Hirschwald

Preyer, Prof W Spezielle Physiologie d Embryo (In 4 Spgn) 1 Spg Mit 3 chromolith 7 af u Holzsehn 8vo 160 pp Leipzig, Grieben

Puschmann, Prof Dr Thdr Die Medizin in Wien Während der Letzten 100 Jahre 8vo VIII, 327 pp Wien, Perles

Receptformeln der Medicinischen Klinik zu Leipzig 3 Aufl 12mo XI, 26 pp Leipzig, Lorentz

Reichmagg, Dr Alb Die Massage Behandlung, Populär Dar gestellt 8vo III, 50 pp Wien, Toeplitz, & Deuticke

Robinski, Dr Severin Zur Kenntniss der Angeneilse u deren Untersuchungs Methoden 8vo 62 pp Berlin Grosser

Roser, Geh Med R Prof W Handbuch der Anatomischen Chirurgie 8 Aug 3 (Schluss) Abth 8vo XIII, pages 481 826 Tübingen, Laupp

Sperlingk, Alf Üb echte Strophobie Inaugural Dissertation 8vo 52 pp Dorpat, Sehnakenburg

Stahl Dr Karl Geburtshülliche Operationslehre 8vo VIII, 198 pp Stuttgart, Enke

Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY

VOL I

CHICAGO, DECEMBER 29, 1883

No 25

ORIGINAL ARTICLES

LOSS AND SUBSEQUENT RECOVERY OF A SOFT-RUBBER CATHETER IN THE BLADDER

BY H B OSBORNE, M D, KALAMAZOO, MICH

[Reported to the Kalamazoo District Medical and Surgical Association
Nov 27, 1883]

MR PRESIDENT AND FELLOWS

I wish to relate the circumstance of the loss of a soft rubber catheter in the bladder, and its recovery twenty-four hours later

The fracture of a silver catheter in the urethra is an occurrence that has frequently been recorded, and that of a gum catheter also, but the loss of a complete soft rubber catheter is unique to me. On October 12 a young gentleman came to my office for the relief of an over-distended bladder, stating that he had not urinated in about twenty hours. He was on the dancing-floor, and had an urgent call to empty the bladder the evening before, but postponed the act until the "figure was through." When he made the attempt he found he could not accomplish the act because of a sharp pain in the perinæum. On examination, I found an enlarged and oedematous penis, the result of a recent clap, from which he was still suffering. Thinking the urethra might be quite sensitive, I took a No 13 soft rubber catheter, warmed and well oiled, gently wormed it into the bladder. There came at once a free flow of strong ammoniacal urine, and mixed with a muco-purulent matter. Then the stream became small and dribbling, yet he desired me to hold on a moment before withdrawing the instrument, as he felt that there was more to come. I grasped the penis with three fingers of my right hand, and held the catheter with my thumb and index finger, which were oily, and holding a cup with my left, I requested him to make expulsive effort. With the attempt there was a spasm of the bladder, and so quick and powerful that the instrument slipped from my grasp and disappeared in his urethra. I grasped the penis, and found that the instrument had receded some three inches within the urethra. I called for my fixation and long dressing forceps. Finding the former too short, I introduced the long forceps in the hope of grasping the catheter, but as I approached it and began opening the jaws of the forceps there was an-

other spasmodic contraction, and the instrument receded into the bladder. Possibly some of you can imagine my feelings at this moment.

I quietly told the young man not to be alarmed but that I would remove it on the morrow. I searched the instrument stores and the doctors' offices for an instrument to remove foreign bodies from the bladder, but in vain, and telegraphed to Chicago for Mathieu's little instrument to be sent by express. I then made an appointment with Dr H O Hitchcock to meet me at my office the next day at 3 P M.

During this time I was worrying some, and fearing that the instrument might not come, trying to devise some means for the removal of the catheter and relief of my patient, and finally settled on a No 8 brass wire, and after doubling it on itself and soldering it together, using its free ends for rings, I made a curve the same as in Gouley's or Otis' sound, and leaving the distal end a half inch longer than necessary, which I bent sharply toward the curve, over a No 12 steel sound, and my instrument was finished, which on sight met the approval of Dr Hitchcock, and at 3 30 P M, October 13, we found that the instrument telegraphed for had not arrived. We resolved to try our own instrument. After well oiling it I introduced it into the bladder and passed my finger into the rectum, and gave over the manipulation of the instrument to Dr Hitchcock, who rotated it a moment and began its withdrawal. I felt the end of the instrument pass from the bladder into the membranous urethra with something in its grasp which felt like the missing catheter. The withdrawal continued till the instrument had passed the prostatic urethra, where it hung, and further attempts at withdrawal caused the patient so much pain that I administered a little ether, and as soon as possible began other maneuvers for its withdrawal. Dr H inserted his left index finger into the rectum, and I used considerable force in a line with the curve of the instrument, but without much progress, when Dr H rotated the instrument and depressed the handle with continual traction, when, to our delight, the catheter appeared at the meatus, doubled and firmly held in the grasp of the instrument. We slit the meatus about four lines, when the delivery was safely and easily accomplished, much to the relief of our minds and likewise our patient's bladder. The instrument, though crude, did its work well, and is, I think, worthy of trial under similar circumstances.

REPORT OF LIBRARIAN

ANNUAL REPORT OF THE LIBRARIAN OF THE
AMERICAN MEDICAL ASSOCIATION AT THE ANNUAL
MEETING IN CLEVELAND, JUNE, 1883.

[By C H A Kleinschmidt, M D, Washington, D C]

CATALOGUE OF ADDITIONS BY DONATIONS, EX-
CHANGES AND SUBSCRIPTION TO THE LIBRARY
OF THE AMERICAN MEDICAL ASSOCIA-
TION, FROM MAY 1, 1882, TO MAY
1, 1883

Army Engineer Department (United States)—Annual Reports of the Chief of Engineers for 1881, 3 vols 8vo, for 1882, 3 vols, 8v. Donor, Engineer Bureau Professional papers of the Corps of Engineers No 24, 1882—Report upon the Primary Triangulation of the United States Lake Survey, Lieut Col C B Comstock, Corps of Engineers No 25, 1883—Report upon the Practice in Europe with the Heavy Armstrong, Woolwich and Krupp Rifled Guns Submitted by the Board of Engineers, Col F B Towers, President of the Board, Donor, Engineer Bureau

Army Medical Department—Annual Report of the Surgeon-General U S A for 1882 Donor, Surgeon-General's Office Index Catalogue of the Library of the Surgeon-General's Office Authors and Subjects, vol III, Donor, Surgeon-General's Office

Bartlett (E J) M D—Adulteration of Food Concord, 1882, Donor, Author

Buge, (E A) M D—Die Zahl der Nerven faseren und der motorische Ganglien-Gellen im Rückenmark des Erosches Aus dem Physiologischen Institut zu Leipzig, 1882, pp 44, Donor, Author Ueber die Reizbarkeit der motorischen Ganglionzellen des Rückenmarks Aus dem physiologischen Institut zu Leipzig, 1882 Donor, Author

Bohl, (Christian)—Einfluss der tetanisirenden Irritanten auf form und Groessen der Tetanus Curve, Leipzig, 1882, Donor, Author

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Campbell, (A S)—Gunshot Wound of the Abdomen Reprint, pp 16 Augusta, Ga, Donor, Author

Cathell (D W)—Physician (the) himself, pp 208, Baltimore 1882, Donor, Author

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Boas (F)—Beiträge zur Erkenntniss der Farbe des Wassers Kiel, 1881

Clausen (F)—De Scholus Veteribus in Aves Aristophanis Compositis Kiel, 1881

Hempel (O)—Quæstiones Theocritese Kiel, 1881

Man (W)—Ueber Scoloplos Armiger, O F Muller Leipzig, 1881

Muller (K)—Vergleichende Untersuchung der Anatomischen Verhältnisse der Clusiaceen, Hypericaceen, Dipterocepraceen und Ternstroemiaceen Kiel, 1881

Neumann (H)—De Pluri dubi Sermonis Libris Charisie et Prisciani fontibus Kiel, 1881

Oelfen (H)—Die Differential gleichungen für das Gleichgewicht der isotropen elastischen Platte Kiel, 1881

Peters (G)—Weber Siderosis Kiel, 1881

Peterson (G)—Ueber die Stoffwechsel-Vorgänge beim Intermittensfall Kiel, 1881

Quehl (K)—Der Gebrauch des Konjunctivs in den ältesten französischen Sprachdenkmalen Kiel 1881

Rehder (J)—Ueber Sectio Alta Kiel, 1881

Scheffer (A)—Beitrag zur Statistik der modification Lineas-Extraction Kiel, 1881

Thomsen (H)—Die rechtliche Willensbestimmung Kiel, 1882

Wetzel (A)—Die Translatio S Alexander Kiel, 1881

Wefelscheid (G)—Beiträge zur pathologischen Anatomie der Spondylitis und Arthritis der Halswirbelsäule Kiel 1881

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District of Columbia—Georgetown University Medical Department Annual Announcement 1882-83

Howard University Medical Department Annual Announcement 1882-83

Georgia—Southern Medical College, Atlanta Annual Announcement for 1882

Maryland—Johns Hopkins University Circulars Nos 15 to 22 Register for 1881-82 Seventh

Annual Report Maryland University, Medical Department Annual Circular for 1882

Woman's Medical College, Baltimore Announcement for 1882

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Massachusetts—Harvard University, Medical School One hundredth Annual Catalogue 1882-83

Michigan—Michigan College of Medicine, Detroit Annual Announcement for 1882

New York—New York City American Veterinary College Annual Announcement for 1882-83

Ohio—Medical College of Ohio Annual Announcement for 1882-83

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Eklund (Fredrik)—Den miasmatiske-Kontagiosa lungsothem och den kroniska lunginflammationens verkliga orsaken och medlen att forebygga dem Stockholm, 1880 Donor, Author

Explorations and Surveys—Report of an Examination of the Upper Columbia River and the territory in its vicinity in September and October, 1881 Lieut Thos W Symons, U S A Donor, Engineer Bureau

Foreign—Relations of the United States papers relating to the, transmitted to Congress, with the annual message of the President, December 5, 1881 Washington, Government Printing Office, 1882, 8vo, XCII, pp 1250 Donor, Department of State

Formad, (H F)—Bacillus Tuberculosis Reprint pp 12, Donor Author Aetiology of Tumors Philadelphia, 1881, pp 53, Donor Author Aetiology of Tumors Reprint, pp 13, Donor, Author

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Goddard, (W W)—Two Hard Cases, pp 257, Boston, 1882, Donor Author

Goodwillie, (D H)—Application by Insufflation of Medicated Powders to the Upper Air Passages for the Relief of Catarrhal Conditions, Reprint, Donor Author Arthritis of the Temporo-Maxillary Articulation Reprint, pp 5 Donor Author

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Heiberg (Jacob) and *Hjort* (John)—Proveforelesninger til Concurrance om den Medicinske Professorpost Marts, 1883 Donors Authors

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London—Saint Bartholomew's Hospital Reports, Vol XVIII, 1882, pp 494 Exchange Saint Thomas' Hospital Reports (New Series) Vol XI 1882, pp 419

UNITED STATES

District of Columbia—Columbia Hospital for Women and Lying-In Asylum Annual Report for 1882 Donor Dr P J Murphy

Massachusetts—State Lunatic Hospital at Northampton Report for 1882, pp 86

New York—New York Hospital and Bloomingdale Asylum Report for 1882, pp 53 Inebriate Home, Fort Hamilton, N Y Annual Report of the President, L D Mason, M D, pp 27 Donor Author State Lunatic Asylum, Utica Reports for 1881 and 1882

Hygiene Public—National Board of Health Annual Report for 1882, pp 43 Donor National Board of Health National Board of Health bulletin, Vol III, Nos 47-52 Index to Vol III Vol IV, No 1 Washington, D C 4to weekly Donor National Board of Health

Colorado—Annual Report of State Board of Health, 1879-80

Connecticut—Annual Report of State Board of Health for 1881

District of Columbia—Monthly bulletin for September and October, 1881, November, 1882, March, 1883 Report for 1881 Donor Health Officer

Illinois—Annual Report of State Board of Health for 1880

Michigan—Annual Report of State Board of Health for 1882

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Keasby and Mattison—Dextro Quinine

Lamb, (D S)—Report of the Post-Mortem of the Body of C J Guiteau Reprint pp 22 Donor Author

Lochmann, (E F)—Om Immunitet Donor Author

Marine Hospital Service, United States—Annual Report of the Supervising Surgeon-General for 1882 Donor Supervising Surgeon General

Marcy, (H O)—The Best Methods of Treating Operative Wounds Reprint pp 16 Donor Author

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Mason, (Theodore L.) Address Inebriety a Disease 1882 Donor Author

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New South Wales in 1881—Thos Richards, Sydney, 1882 pp 144 Donor Royal Society of New South Wales

Agata (M)—Ueber die Verdauung nach der Aus-

haltung des Magens Aus dem physiologischen Institute zu Leipzig, pp 17 Donor, Author
Parke, Davis & Co—Working Bulletins, 1882 Donor, Parke, Davis & Co

PERIODICALS

Belgium—Archives Médicales Belges, Organe du Corps Sanitaire de l'Armée, Buxelles Third Series, Vol xxi Fasciculi 3, 4, 5, 6, Vol xxii, vol xxiii Fasciculi 1, 2, 3 Exchange

BRITISH AMERICA

Canada (the) Medical Record, Editor, Francis W Campbell, Montreal Vol x, Nos 8-12, vol xi, Nos 2-6 Exchange

Canada Medical and Surgical Journal, Montreal Vol x, Nos 11, 12, vol xi, Nos 1 to 9 Exchange

Canadian (the) Journal of Medical Sciences, Toronto Vol vii, Nos 5 to 12 Exchange

Canadian Practitioner (the), formerly the Canadian Journal of Medical Sciences, vol viii, Nos 2, 3, 4 Exchange

L'Union Médicale du Canada Revue mensuelle de Médecine et de Chirurgie, Montreal, vol xi, Nos 5 to 12, vol xii, Nos 1 to 6 Exchange

FRANCE

Algeria—Gazette Médicale de l'Algérie, Directeur, Fondateur le Dr A Bertheraud, 29 Rue Bergère, Paris monthly, 27 Année, Nos 11 to 15, 17 to 21, 24, 28 Année Nos 1, 4, 5 Exchange
 Journal de Médecine et de Pharmacie de l'Algérie, Médecine et Hygiène de Colonisation, Pharmacie et Chimie Médecine Vétérinaire Igies la direction de M le Dr E L Bertheraud Algiers (7 Reve Bruce) 5mo Année No 3 7mo Année Nos 10, 11, 8mo Année No 1

Paris—Archives Navale Recueil fondé par S E Le Cte P de Chasseloup-Laubat, Ministre de la Marine et des Colonies Publié sous la surveillance de l'inspection générale du service de sante Directeur de la Rédaction, A Le Roy de Mericourt Tome xxxvii, Nos 4 to 12 Tome xxxviii, Nos 2, 3, 4 Exchange

Journal de Médecine et de Chirurgie pratiques a l'usage des médecins praticiens Fondé par Lucien Championnière, Tome liii, Nos 4, 5 to 12 Tome liv, Nos 1 to 4 Exchange

La Lumière Electrique, Journal Universel d'Electricité 3mo Année, No 71, 4mo Année, Nos 2 to 7

Lancette, La, Française, Gazette des Hôpitaux Civils et militaires, paraissant les mardi, jeudi et samedi 54mo Année, Nos 124 to 151, 55mo Année, Nos 1 to 150, 56mo Année, Nos 1 to 13 Exchange

Recueil de Mémoires de Médecine de Chirurgie et de Pharmacie Militaire, Publié par ordre au Ministre de la Guerre sous la direction du Conseil de Santé des Armées Paraissant tous les deux mois Tome xxxviii, Nos 209 to 212 Exchange

Revue Scientifique et Administrative des Médecins des Armées Paraissant tous les deux mois, 33mo Année, vol x, Nos 200 to 202 Exchange

Service de Sante Militaire, Bulletin du Paraissant um fois par mois 32mo Année, Nos 297 to 299, Nos 301 to 305 Exchange

GERMANY

Leipzig—Derztliches Vereinsblatt für Deutschland. Organ des Deutschen Aerztvereinsbundes Redacteur, Dr Heinze, vol xi, Nos 121 to 128, vol xii, No 120 to 131 Exchange

GREAT BRITAIN

Customs Gazette—Imperial Maritime Customs Medical Reports Published by order of the Inspector-General of Customs, Shanghai, China Nos 21 to 23 Exchange

Glasgow, the, Medical Journal, edited by Joseph Coats, vol xvii, Nos 5, 6, vols xviii, xix, Nos. 1 to 4 Exchange

RUSSIA

St Petersburg Medicinische Wochenschrift Redacteur Dr Moritz Vol VII, Nos 17 to 52 Vol. VIII, Nos 1 to 4, 6 to 10, 14 Exchange

SWEDEN

Nordiskt Medicinskt Arkiv Unders Medeverken af Prof Dr G Asp (and others) seegeradt af Dr Axel Key Stockholm tjortonde Bandet Exchange

UNITED STATES

American (the) Journal of Dental Science Edited by F J S Gorgas Monthly Baltimore Third Series, Vol XVI, No 3

American (the) Journal of Insanity Edited by the Medical Officers of the New York State Lunatic Asylum Quarterly Utica Vol XXXIX, Nos. 1 to 3 Exchange

American, the, Journal of Obstetrics and Diseases of Women and Children Quarterly Editor P F Munde Vol XV, Supplements for June, October, November and December

American, the, Medical Weekly New York E. S Gaillard, Editor and Publisher Vol XIV, Nos 21 to 27 Vol XV, Nos 2 to 21, 23 to 26. Vol xvi, Nos 1 to 3 Exchange

American, the, Veterinary Review A Liautard, Editor New York Vol vi, Nos 3 to 6, 8 to 12 Vol vii, Nos 1, 2 Exchange

Annals of Anatomy and Surgery The Journal of the Anatomical and Surgical Society Brooklyn, N Y Edited by L S Pitcher, G R Fowler Vol vii, Nos 1 to 4, 6 Vol viii, Nos 1, 2, 4 Exchange

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Atlanta Medical Register New Series Vol i, Nos 9, 10, 11 Vol ii, Nos 2, 3, 5 Exchange
 Bistoury, the, Elmira New York Quarterly Thad S Updegraff, editor Vol xix, Nos 2, 3, 4 Vol xx, No 1 Exchange

Boston, the, Journal of Chemistry Devoted to the science of home life, the arts, agriculture and medicine Now under the title "The Popular Science

- News and Boston Journal of Chemistry" Vol vi, Nos 5 to 12 Vol vii, Nos 1 to 5 Exchange
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- Chicago (The) Medical Journal and Examiner Monthly Editor, W H Byford Vol XLIV, Nos 5, 6 Vol XLV, Nos 1 to 5 Exchange
- Cincinnati (The) Lancet and Clinic A Weekly Journal of Medicine and Surgery, issued every Saturday New Series, Vol VIII, Nos 21 to 25 Vol IX Vol X, Nos 1 to 18 Exchange
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- Detroit (The) Clinic A Weekly Exponent of Clinical Medicine and Surgery Edited by H O Walker and O W Owen Vol 1, Nos 24 to 52 Exchange
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- Eclectic (The) Medical Journal Monthly Cincinnati Editor, J M Scudder Vol x to 11 Nos 6 to 12 Vol x to iii Nos 1 to 5 Exchange
- Gaillard's Medical Journal (formerly Richmond and Louisville Medical Journal) New York Monthly Editor, E S Gaillard Vol xxxv Nos 1 to 6 Exchange
- Gaillard's Medical Journal (The American Medical Weekly New York Editor, E S Gaillard Vol xxxv Nos 4 to 18 Exchange
- Independent, The, Practitioner A Monthly Journal, devoted to Medicine, Surgery, Obstetrics, Dentistry, Pathology, and Popular Science Editors, L H Hunt, W C Barrett Baltimore Vol iii Nos 5 to 8, 9 to 12 Vol iv, Nos 1 to 4 Exchange
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- Kansas Medical Index (Now Kansas and Missouri Valley Medical Index) F F Dickman and W C Boteler, editors Fort Scott Vol 3, Nos 5 to 12, Vol iv, Nos 2 to 4 Exchange
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- Maryland, The Medical Journal A semi-monthly journal of medicine and surgery Edited by T A Ashby and others Vol ix, Nos 3 to 24 Exchange
- Medical, The, Age A semi-monthly review of medicine and surgery Detroit Editor, J J Mulheron Vol 1, Nos 1 to 8 Exchange
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- Medical, The, Bulletin A monthly journal of medicine and surgery Editor, J V Shoemaker Philadelphia Vol iv, Nos 6 to 12, Vol v, Nos 1 to 4 Exchange
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- New Orleans, The, Medical and Surgical Journal Edited by S M Bemiss, W H Watkins, S S Herrick Monthly Vol ix, No 12, Vol x, Nos 1 to 10 Exchange
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- North Carolina Medical Journal Thomas F Wood, editor Wilmington, N C Vol ix, Nos 5, 6, Vol x, Nos 1 to 4 Exchange
- Obstetric, The, Gazette A monthly journal devoted to obstetrics, with diseases of women and children E B Stevens, editor Cincinnati Vol v, Nos 6 to 12, Vol vi, Nos 2 to 4 Exchange
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- St Louis Clinical Record A monthly journal of medicine and surgery Edited by W B Hazard Vol ix, No 1
- St Louis Courier of Medicine Published monthly by J H Chambers & Co, for the Medical Journal Association of the Mississippi Valley Vol vii, No 6, Vol viii, Nos 1, 2, 3, 6, Vol ix, Nos 2, 3, 4
- St Louis, the, Medical and Surgical Journal Thos F Rumbold, editor and proprietor Monthly Vol xlii, Nos 5, 6, Vol xliii, Vol xliv, Nos 1 to 4 Exchange
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- Working Bulletins, sent out by the scientific department of Parke, Davis & Co, Detroit, Mich Donors—Parke, Davis & Co
- Rohr (G H) Some Points on the Administration of Anæsthetics Baltimore, 1882 Donor, author
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Senn, (N)—The Pathology and Morbid Anatomy of Tubercle Reprint Donor, Author
Societies—Australia—New South Wales Royal Society Journal and Proceedings, Sydney 8vo, vol xv, 1881

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 Mémoires Couronnées et autres Mémoires publiés 1881 Tome vii, fasc 2, 3 Exchange

Liege—Société Médico Chirurgicale Annales de la 21 Année, May to December, 1882, 22 Année, January to March Exchange

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Paris—Académie de Médecine, Bulletin, tome x, No 417, tome xi, Nos 16 to 18, 24, 33, 39 to 51 Index to tome xii, Nos 1 to 16 Exchange
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Bulletin de L'Intendance, Annuaire du Corps de Contrôle de l'Administration du Corps de L'Intendance, et du Corps des Officiers d'Administration des Bureaux de l'Intendance, des Substances, des Hôpitaux, de l'Habillement et du Campement de l'Armée Française 1883, pp 310

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Rouen—Société de Médecine, Union Médicale de la Seine-Inférieure, Journal de la Publie par les soins de M Jude Hue, Secrétaire du Bureau Nos 66 to 69

GERMANY

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GREAT BRITAIN

London—Pathological Society Transactions, vol xxxiii, pp 453 Exchange

HOLLAND

Amsterdam—Koninklijke Akademie von Wetenschappen Verslagen en Mededelingen Dnl xvi Exchange

ITALY

Milan—Reale Istituto Lombardo di Scienze e Lettere Rendiconti serie ii, vol xiv Exchange

RUSSIA

Moscow—Société Imperial des Naturalistes, Bulletin de la 1881, Nos 3, 4, 1882, No 1 Index to the first 56 volumes Exchange

SWITZERLAND

Lausanne—Société Vaudoise des Sciences Naturelles Bulletin Vol xii, No 85, 86, vol xviii, No 87 Exchange

St Gallen—Naturwissenschaftliche Gesellschaft Bericht über die Thätigkeit 1880 to 1881 Exchange

UNITED STATES

American, the, Gynecological Society Transactions Vol 6 Exchange

American, the, Institute of Homœopathy Transactions, 35th Exchange Address by the President of, W L Breyfogle Pittsburgh, 1882

American, the, Medical Association Transactions, vol xxviii

American, the, Pharmaceutical Association Proceedings, vol xiv Exchange

Arkansas—State Medical Society Minutes for 1881 Exchange

California—State Medical Society Transactions, 1881, 1882 Exchange Address before the Medical Society of California, Tyrrell, 1882

Connecticut—Medical Society Proceedings of the annual convention, 1882 Exchange

Delaware—Medical Society Proceedings for '79

Iowa—State Medical Society Transactions, '79, 1880, 1881, '82 Exchange

Kentucky—State Medical Society Minutes, '79 and '80

Maryland—Medical and Surgical Faculty Transactions, '80, '82 Exchange

Massachusetts—Medical Society Medical communications, '82, Exchange

Michigan—State Medical Society Transactions, '79, '80, '81 Exchange

Minnesota—State Medical Association Transactions, 1882 Exchange

Mississippi—State Medical Association Transactions, 1880, 1881, 1882

New Hampshire—Medical Society Transactions, 1879, 1882 Exchange
New Jersey—Medical Society Transactions, 1882 Exchange
New York—(Brooklyn) Medical Society of the County of Kings, Proceedings, etc., Vol vii, Nos 3 to 7 Exchange New York State Medical Society Transactions, 1882 Exchange
North Carolina—Conjoint Session of the State Medical Society and Board of Health, 1882 Exchange
Oregon—State Medical Society Proceedings, Vols 2-9 Donor Society
Pennsylvania—Philadelphia College of Pharmacy Annual Report of the Alumni Association, 1882 Donor Association State Medical Society Transactions, Vol vii, part 2, 1879, Vol xiv, 1882 Exchange
South Carolina—Medical Association Transactions, 1882 Exchange
Tennessee—Medical Society Transactions, 1882 Exchange
West Virginia—Medical Society Transactions, 1879,
Wisconsin—Medical Society Transactions, 1881 Exchange
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Symmetadt, (A S D) and Voss, (J) En Anatomisk Beskrivelse af de paa over og Underskæmte tetterne forekommende Bursæ Mucosæ Præbetu-net Afhandling Christiana, 1869 Donors Authors,
Talavera, (V H) Application of Pressure in Diseases of the Uterus, etc Reprint, Atlanta, 1882 Donor Author
Wile, (H) Pathogenesis of Secondary Tumors Reprint Donor Author
Worm-Müller Om Urinsyrens Forhold til Kobberoxgdog Alkali Christiana, 1881 Donor Author

LIST OF DELEGATES AND MEMBERS.

THE FOLLOWING IS THE OFFICIAL LIST OF DELEGATES AND MEMBERS IN ATTENDANCE UPON THE ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION, IN CLEVELAND, JUNE, 1883.

ALABAMA

Bullock County Medical Society—Richard L Butt
 Montgomery Medical and Surgical Society—Wm Owen Baldwin

ARKANSAS

State Medical Society—John F Blackman, James T Jelks, James M Keller, John J McAlmont, F G McGavock, Edward Meek, Robert C Prewitt, Henry H Turner

Permanent Members—W. H. Hawkins,¹ Daniel A Linthicum

CALIFORNIA

State Medical Society—Wm M Lawlor, Wm Fletcher McNutt, Henry Sayre Orme
 San Bernardino County Medical Society—Wm R Fox

COLORADO

State Medical Society—H K Steele

CONNECTICUT

State Medical Society—Geo W Avery, Curtis H Bill, Benj H Comings, Chas Gardiner, T Morton Hills, Wm C. Wile

Fairfield County Medical Society—A E Barber, Geo L Porter, G A Shelton

Hartford County Medical Society—John Alex Stevens

New Haven County Medical Society—Lewis Baines Arnold, Chas H Pinney

Permanent Member—Wm W Welch

DAKOTA

Territory Medical Association—J B Van Velsor

DELAWARE

State Medical Society—Lewis P Bush, Wm Marshall

DISTRICT OF COLUMBIA

Medical Association of District of Columbia—C W Franzoni, Alex Y P Garnett, C H A Kleinschmidt, William Lee, DeWitt C Patterson, D Webster Prentiss, Joseph Meredith Toner

GEORGIA

Georgia Medical Association—Ely K Bozeman, Henry F Campbell, Eugene Foster, Lamartine G Hardman

ILLINOIS

State Medical Society—Charles C Allen, Philip H Burton, George W Cox, Nathan Smith Davis, C DuHadway, Lewis D Dunn, Curtis T Fenn, Rufus W Gillett, B M Griffith, John H Hollister, Herbert Judd, Elizabeth S Norred, T, J Pitner, Michael Roney, Lucius G Thompson

Central District Medical Society—Isaac W Fink, William Hill

Northern Central District—Wm O Ensign
 Adams County Medical Society—Abby Fox Roney

Æsculapian Society of the Wabash Valley—W M Chambers, Hulbert H Clark

Aurora Medical Society—I E Bennett, Julius A Freeman

Brainard District Medical Society—Joseph W Newcomer Charles H Norred, Farinda J Shipp

Brown County Medical Society—William M Cox, George H Tebo

Chicago Medical Society—W W Allport, Edmund Andrews, William T Belfield, Truman W Brophy, Walter L Dorland, E C Dudley, Ephraim Ingals, Frank S Johnson, John S Marshall, Liston H Montgomery, Henry P Newman, George Henry Randell, Arthur Rowley Reynolds, David A K Steele, Simon Strausser, Eugene S Talbot, Wm Porter Verity

Cook County Medical Society — Charles T Parkes
 DeKalb County Medical Society — George W Nesbitt
 Fox River Valley Medical Association — Charles N Cooper
 Hancock County Medical Society — Josiah R Kelly
 McLean County Medical Society — Thomas F Worrell
 Military Tract Medical Association — Samuel K Crawford, Hugh Marshall, Madison Reece, Albert S Slater
 Morgan County Medical Society — T M Cullmore, Newton S Read
 Peoria City Medical Society — J L Hamilton, Wm A Johnston
 Polk County Medical Society — Robert A Patchin
 Vermilion County Physicians and Surgeons — J R Livingood
 Whiteside County Medical Society — Francis E Melugin, S Taylor
 Will County Medical Society — David W Jump, William M Richards
 Winnebago County Medical Society — D Selwyn Clark, A E Goodman
 Permanent Members — E P Cook, J B Davison, Chas Warrington Earle, Christian Fenger, E L Griffin, Moses Gunn, Walter Hay, Edward W Jenks, Hosmer A Johnson, R J Patterson, John H Rauch, C V Rockwell, Charles Gilman Smith, Adelbert H Tagert

INDIANA

State Medical Society — W W Arnold, Ferdinand W Beard, Lavanner Corey, Elmer E Glover, Alonzo H Good, James S Gregg, Myron H Harding, Thomas B Harvey, James F Hibberd, Timothy T Linn, H D Reasoner, Marshall Sexton, Thaddeus M Stevens, George Sutton, L D Waterman, J C Webster, J R Weist, H D Wood, T F Wood, B S Woodworth
 Adams County Medical Society — W A Byrd, Benjamin R Freeman
 Allen County Medical Society — G L Greenawalt, W H Myers
 Blackford County Medical Society — Henry C Davison
 Boone County Medical Society — Carter H Smith
 Cass County Medical Society — Wm H Bell
 Dearborn County Medical Society — Thomas E Craig, Wm C Henry
 Decatur County Medical Society — Joel T Tevis
 Delaware County Medical Society — W J Boyden, G W H Kemper
 Elkhart County Medical Association — H T Montgomery, Chelius S Priley, James Anderson Work
 Fayette County Medical Society — Vincent H Gregg
 Floyd County Medical Society — Elihu P Easley
 Grant County Medical Society — Alpheus Hendry, Wm Loman, John S Sprowl
 Hancock County Medical Society — Noble P Howard

Henry County Medical Society — George W Burke, Elihu S Mendenhall
 Howard County Medical Society — William Scott
 Jay County Medical Society — Christopher S Arthur
 Johnson County Medical Society — Jacob A Marshall, William M Province
 LaGrange County Medical Society — H M Casebeer, William H Short
 Madison County Medical Society — John W Hunt, John W Perry
 Marion County Medical Society — Frank M Ferrel, Charles D Pearson, James L Thompson
 Miami County Medical Society — Edmund M Bloomfield
 Morgan County Medical Society — H W Care
 Noble County Medical Society — Joseph L Gilbert, Salathiel T Williams
 Pulaski County Medical Society — Harris E Pattison, G W Thompson
 Randolph County Medical Society — Lewis N Davis
 Rush County Medical Society — Samuel N McMahon
 Tippecanoe County Medical Society — William S Walker
 Wabash County Medical Society — Perry G Moore, Laughlin O'Neal
 Wayne County Medical Society — Iris I Courtney
 Permanent Members — R T Blount, George I Bruebach, Jacob B Casebeer, Marcus F Cram, George W Crapo, George H Dayton, Joseph L Hagerty, John H Helm, C B Higgins, Joseph Iutz, L S Keene, John E Link, Charles R Mason, Theophilus Parvin, Landon C Rose, Christian B Stemen, Norman Ieal

IOWA

State Medical Society — Lyman J Adair, William Henry Baxter, W H Christie, Benton H Crilley, Charles W DeNotte, W Eastman, L S Groves, Gershom H Hill, Jonathan H Kersey, Benjamin McClure, John North, Washington F Peck, A B Reed, George Warne, Ira L Welch, Frank A Xanten
 Central Medical Association — Wm Beckford Kibbey
 Buchanan County Medical Society — Griffy Benjamin Ward
 Delaware County Medical Society — Charles C Bradley, Benjamin H Reynolds
 Dubuque Medical Society — George Minges
 Fayette County Medical Society — James W McLean
 Jackson County Medical Society — Asa B Bowen
 Muscatine County Medical Society — W S Robertson
 Polk County Medical Society — Robert A Patchin, David W Smouse, Arthur Leland Worden
 Scott County Medical Society — James Gamble, John Knox
 Sioux City Medical Society — B A Guyton, Jr
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THE
Journal of the American Medical Association.

PUBLISHED WEEKLY

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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No. 65 RANDOLPH STREET,
CHICAGO, ILLINOIS

SATURDAY, DECEMBER 29, 1883

EXPLANATIONS—The present number closes the first volume of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

It was the original intention to have the JOURNAL commence the first week in July, that the volumes might represent the even half years, commencing with July and January of each year. Owing to unavoidable causes, the first number was not issued until the second week in July, and consequently this volume closes with the 25th instead of the 26th number.

In commencing a work of such magnitude as this we expected to meet with embarrassments that would subject us and our work to more or less criticism, and in this respect we have not been disappointed. To publish and distribute three or four thousand copies of a journal of this size each week, not only requires a printing establishment containing an ample supply of type and corps of compositors, but also a well-trained and efficient foreman, a skilled proof-reader, and a well-drilled corps of folders, stitchers, wrappers and mailers.

To say that our excellent publisher, though possessed of an ordinarily well appointed and reliable printing establishment, was not provided with these last-named requisites, is doing him no injustice, simply because he was not previously publishing anything requiring such service. Consequently, every issue showed some defect that ought to have been avoided by more skill in the foreman, and more care on the part of the proof-reader, and so much time would be consumed in the folding, wrapping, etc., as to make each number reach its readers much behind its date.

The remedying of these defects has required some patience, and the greater part of the past six months of time. That they have been substantially removed, and that our publisher's machinery is now in very good working order, the appearance of the last three or four numbers of the JOURNAL fully proves. And our publisher enters upon the work of the new year and the second volume with a well-qualified foreman, a professional proof-reader, a well-drilled corps of folders, wrappers, etc., and with a supply of type that will enable us to give the author of every important original paper an opportunity to examine the proof sheets for himself, provided he does it with a reasonable degree of promptness.

When the Board of Trustees made its report to the meeting of the Association in Cleveland last June, and the publication of the JOURNAL was ordered only about 2,000 pledges of support had been obtained, and it was estimated that the result of the Cleveland meeting would probably add 500 more, giving a list of 2,500 paying members and subscribers to constitute the list of supporters at the beginning of our enterprise. Relying upon this basis, it was thought safe by the Board, at its last meeting, to commence the publication with an edition of 3,500, or 1,000 in excess of the expected actual basis of support. But the first three numbers had not been issued, before it became evident that the number just stated would not be sufficient, and the edition was increased to 3,800, and now, at the end of the first six months, the actual circulation is, in round numbers, 3,600. Not anticipating so great an increase, we allowed some copies of numbers one and two to be sent out as specimens, and a liberal supply of number seven to some of the writers whose papers were contained in it. This resulted in the necessity of reprinting number one several weeks since, and number seven more recently. The latter number has been withheld from nearly all those whose names have been sent to us during the last few weeks, but it will be supplied to all within the next ten days.

When the present copy reaches its readers, it will be a special accommodation to us, if each one will carefully examine his file from the beginning, and send us at once, on a postal card, notice of whatever numbers are *missing*, or materially imperfect, and we will take pleasure in supplying them without charge, that all who are entitled to the present volume may have it as complete as possible, before the surplus numbers are packed up and put out of the way. And if any parties chance to have duplicate copies of numbers *two* and *six*, they will confer a favor by mailing them to us.

The title page and index are printed and so stitched in the middle of the present number, that the binder can loosen and remove them to their proper places in the volume when the binding is done

We shall continue to furnish a complete file of the JOURNAL to members of the Association whose names are sent to us by the Treasurer, as having paid their membership dues for 1883, but all new subscribers who are not members should have their subscriptions commence with the second volume, January 1, 1884

We have made the foregoing statements simply because we thought they would be of interest, especially to members of the Association. Thus far, instead of being annoyed, we have endeavored to profit by the criticisms bestowed upon our work, while we have been comforted and encouraged by the words of approval that have accompanied almost every remittance from our subscribers. If there are any who envy us our position and think they could have performed its duties better, we only wish they could have had the opportunity to try

CORRECTIONS —We take pleasure in copying the following notes, which will explain themselves

DECEMBER 22, 1883

My Editor —In your issue of December 15, there was a review of the Annual Report of the Supervising Surgeon-General of the Maine-Hospital Service for the year 1883, in which the reviewer has fallen into an error, evidently due to his misapprehension of the system employed in reporting autopsies. On page 685, first column of your journal, he has noted a case, reported on page 229 of the Report, in which he states there was "no diagnosis." For the benefit of those who may fall into the same error, it seems proper to state that there are reported several autopsies of patients dying from the same disease, each of which is serially numbered. He will find that the case to which he alludes is No 8 of the series of "Diseases of the Heart," the first of which is on page 227 of the Report

Very Respectfully,

CHAS E BANKS *P A Surgeon M H S*

DECEMBER 24, 1883

EDITOR OF JOURNAL OF AMERICAN MEDICAL ASSOCIATION

Dear Sir —In your issue of the 15th inst, page 683, the reporter in the discussion about jequirity in the Chicago Medical Society, has so seriously misquoted me that I must in justice to myself ask of you to correct it. I am represented as saying that "a small quantity of hyd chl cor would increase the efficiency of the remedy." I stated that the inflammation and consequent advantage was unquestionably due to the presence of bacteria, and that an interest-

ing observation would be to know whether the infusion made with a weak solution of bichloride of mercury would destroy its action

Yours truly

R TILLEY, M D

NEW INVENTIONS

A SENSITIVE THERMOSTAT —Dr N A Randolph (*Journal of the Franklin Institute*) has simplified the principle of the Bunsen gas regulator as modified by Geissler, by making the diaphragm in the test-tube of a tight-fitting rubber cork, between the diaphragm and the mercury, which, in an ordinary test tube of 6 by 1 inch, occupies $1\frac{1}{4}$ inches, he has a layer of 2 inches of rectified alcohol, this increases its sensitiveness, as the alcohol can only expand downward, and consequently drives the mercury up through the little glass tube which pierces the diaphragm and passes to within $\frac{1}{8}$ of an inch of the bottom of the test-tube. The arrangement of the instrument for use would suggest itself to all who have used the gas regulator—that of a second rubber cork with two openings to close the test tube, provided also with tubes, one a short one passing into the upper chamber so made and communicating with the rubber tubing of the burner, and the other longer, connecting directly with the gas supply, and provided with little openings which can be influenced by the mercurial column. Dr Randolph provides the central tube also with a flared, funnel shaped extremity, nearly half an inch in width, which receives the upper long tube and controls the spread of the end of the expanding mercury. The simplicity of this instrument is as much in its favor as its effectiveness, as it can be made in the laboratory by any student

SOCIETY PROCEEDINGS

OBSTETRICAL SOCIETY OF PHILADELPHIA

Stated meeting December 6, 1883, the President R A Cleemann, M D, in the chair

Dr W Goodell exhibited two cysts of the ovarium, and remarked. Both patients got well, he indeed had never lost a patient from whom he had removed a parovarian cyst. In both cases a correct diagnosis was made previous to the operation. One interesting diagnostic point was the complete absence of the facies ovariana. The color in the cheeks was good, and the countenance was free from the anxious expression present in cases of ovarium tumor. One tumor had existed for ten years, the other for one. Another important point in the differential diagnosis is not only the flaccidity of the tumor, but its variable degrees of flaccidity. Upon inspection, it is seen to reach to the sternum, and seems to occupy a large portion of the abdominal cavity, but when the hands are placed upon its sternal edge, it can be compressed to the level of the umbilicus. An ovarium cyst, on the contrary, is hard and uncompressible. Exceptions to this rule are very rare, that is either a tense parovarian cyst or a flaccid ovarium one. A

third important distinguishing point is the long time—ten years in one case—which the tumor existed, and, further, without marked deterioration of health. After being tapped, these tumors usually refill, but occasionally they do not, and a cure is thus brought about. The fluid withdrawn has been in every case limpid, and generally colorless, but it has sometimes had, in his experience, an emerald tint. These tumors are generally free from serious adhesions, but if in an operation for the removal of one, adhesions should exist where for any reason their forcible separation would be unavoidable, or the cyst were intraligamentous he would not hesitate to leave the adherent portion of the cyst wall, or the whole cyst itself, after making a big hole in it, as the fluid it secretes is bland and unirritating to the peritonæum.

Any one examining one of these cysts for the first time would consider it to be of ovarian origin, for it is only by patient search that the ovary can be found, spread out over the cyst wall. The microscope will decide with certainty in any otherwise doubtful case. The tumor is covered with a beautiful net-work of veins.

When a cyst of the parovarium exists on one side, the ovary of the opposite side is usually found to be diseased, and should be removed. In these cases the remaining ovary was seen to be enlarged, and the site of a small ruptured cyst was pointed out. The fallopian tube was also enlarged, and the terminal vesicle of the fallopian tube, or the hydatid of Morgagni, was enlarged and cystic. This hydatid sometimes attains the size of an orange, and often ruptures spontaneously without any bad effects. A few years ago one of these small cysts ruptured, while he was making an examination of the patient to ascertain its character.

Dr Goodell exhibited a cancerous womb removed per vaginam. In view of the very fatal statistics of the operation for the removal of the womb, for the radical cure of uterine cancer, he had been unwilling to perform it. In most of the cases where the disease had been seen early enough by him to give a chance of success, the patient had been unwilling to take the risk. On one occasion, when every preparation had been made to operate, the patient had a convulsion, and an examination of the urine showed a high proportion of albumen, in consequence of which he refused to operate. About a month ago Dr Charles W. Dulles called him in consultation to see a patient in whom the carcinomatous condition was limited to the anterior lip. The womb was movable. The case was put frankly before the patient, and all its dangers pointed out. The choice of them being given to her, she decided, after due consideration, to take the risks of the radical operation. The operation was not as difficult as he anticipated.

The first step in this operation was to scrape away all cancerous tissue, and to sear the remaining surface with Paquelin's cautery. The vagina was then thoroughly cleansed. A stout thread was passed through the cervix to draw down the womb, instead of using a volsellum, the handles of which would be in the way. A circular incision was made around the

cervix, and the tissues were stripped up anteriorly and posteriorly to the reflection of the peritonæum and laterally to the insertion of the broad ligaments. Finally, the peritonæum was opened, and the womb retroverted into the vagina by means of the obstetric crochet passed over the fundus. A strong thread was now passed through the body of the uterus, by means of which to manipulate it more easily. A ligature was now passed around the broad ligament of the right side and secured it *en masse*, and a second double ligature was passed through it and tied on opposite sides. This side of the broad ligament was then divided, the uterus drawn down, and the ligament of the left side secured in a similar manner and divided. The vaginal wound was closed and dressed with iodoform and cotton. A frank peritonitis set in on the third day, and proved fatal on the fourth. The result made him doubtful whether the operation is ever justifiable, he indeed felt disposed to avoid it whenever possible.

Dr E. E. Montgomery inquired about the feasibility of using the galvanic wire ecraseur to divide the broad ligament, keeping the wire at a low red heat and dividing the tissues slowly, and avoiding the necessity for a drainage tube. Another method which he had been revolving in his mind, was by means of the galvanic knife to dissect out the uterus, leaving the peritonæum intact, thus imitating to a certain extent the operation of Dr Marion Sims, of scraping and the use of zinc chloride.

Dr Goodell thought that Dr Montgomery's galvanic wire would get too hot as the loop became small, and would then divide rapidly like a knife, and incur the danger of secondary hæmorrhage. He fears that the steam generated by the hot wire would penetrate the peritoneal cavity and have an irritating effect. He has a galvanic cautery battery, but has not used it since the introduction of Paquelin's benzoline cautery, as he finds the latter far more handy and manageable. He thinks Dr M.'s suggestion of shelling out the uterus a very good one.

Dr Montgomery exhibited, through the courtesy of Dr W. H. Warder, the uterine appendages which had been removed from a young lady for the relief of dysmenorrhœa, which had resulted in physical and mental failure. Menstruation had commenced at the age of 14 years, had always been painful, and had developed hysterical manifestations. Bathing at the sea-shore had at one time stopped the periods for three months after this her health failed. Her mind had been seriously affected for the last three years, and she would run away or do herself some violence at the menstrual periods, if not closely watched. Examination—the uterus enlarged and tender, there was profuse leucorrhœa. The os uteri was dilated, and the uterine cavity scraped and cauterized with carbolic acid, and bromides etc., used internally, but no improvement resulted. The ovaries were removed to-day, through abdominal section, catgut ligatures were used. The ovaries are very much enlarged, and contain small cysts. The abdominal wound was closed with silk sutures, and covered with an impervious dressing of collodion, cotton, etc.

HYSTERO-EPILEPSY AS A COMPLICATION OF PREGNANCY

Dr William H Shipp, of Bordentown, N J sent the following contribution

Briefly defined, hystero-epilepsy is a term applied to an abnormal neurotic condition in which are manifested certain phenomena characteristic both of hysteria and epilepsy. Out of 276 patients confined at La Salpetriere Hospital, Paris, under treatment for various nervous affections, 32 were diagnosed by Beau, a careful observer, as suffering from this disease. Among this number the malady assumed either a distinct or combined form, hence he very wisely groups the cases into two classes. In the first, the hysterical seizures and epileptic fits remain distinct one from the other. To this form he adapts the term given by Landouzy, and designates it as hystero epilepsy with distinct crises.

In the second class, and the one of which this article furnishes an illustration, the hysterical and epileptic seizures are coeval, both developing at the same time. To this form the name of hystero epilepsy with combined crises has been given. The object of this paper is not to enter into a consideration of the disease as it is met with in general practice, but simply to examine it as a complication of pregnancy, a standpoint from which, fortunately, we are rarely called to view it.

During the early part of March, 1883, I was called to attend a woman said to be in a fit. Arriving at the house I found, lying on a bed, a young woman apparently seventeen or eighteen years of age, of fairly vigorous physique, who was striving against the united efforts of two or three neighbors who sought to prevent her doing herself bodily harm in the violence of her struggles. Examination showed entire loss of consciousness, eyes open and staring, pupils widely dilated, frothing at the mouth, which was then tightly closed, pulse full and bounding. Inquiry elicited that during the day she had been visiting a friend, herself the subject of some spasmodic affection, and whilst in her company became greatly exercised on some trivial occurrence, and in this state of excitement returned home which place she no sooner reached than she was seized with a convulsion. Her husband informed me that she was in the third month of pregnancy, and that prior to this morning had had, on two occasions, attacks somewhat similar, though of less severity. I at once injected, hypodermically, one third grain of morphine, which, in a short time, was followed by a total disappearance of all spasmodic action, a state of stupor supervening from which, in the course of three or four hours, she aroused apparently well as ever. On the day following I was called to see her, and found her in a state of high nervous excitement, sobbing and deploring the presence of some impending danger which she, in her imagination, insisted was threatening her. In a short time the stage of muscular contraction, loss of consciousness, stupor etc took the place of the hysterical symptoms, finally terminating as before in a return to her normal condition.

Without attempting to follow the case step by step

taking in all its details, and noting the many and peculiar phases through which it passed it is interesting to note that prior to Sept 23, 1883, covering a period of 200 days, not a day passed without the occurrence of one or more paroxysms. At times the hysterical phenomena would be most marked and usher in the attack. Then again the epileptic fit would take the precedence, always however accompanied by the undeniable imprint of the dual disease, hystero-epilepsy. In the inter-paroxysmal period she enjoyed, for the most part, average good health.

On the morning of September 23 I was asked to see her in an attack of more than usual gravity. When I reached the house she was profoundly unconscious, and had been so for several hours. The time for her approaching labor being near, I made a vaginal examination, but found no evidence of commencing uterine action. I ordered a hot mustard bath, mustard to the extremities, and bromides the moment she should be able to swallow. In the evening, when I again called, her condition was apparently unchanged. I then ordered a blister to the nape of the neck and left the patient, to return early in the morning. At 7 A M a messenger called stating that the woman was now perfectly rational, and to all appearances in labor. I at once responded and found that she was having bearing down pains of moderate intensity at intervals of five or ten minutes, mouth of womb dilated, vertex presenting. I remained by the woman's side until 3 45 P M, when the child, a healthy female, weighing nine or ten pounds, was born. The labor did not differ from ordinary labors, except that it was only by the utmost vigilance that the woman was prevented falling into one of her accustomed attacks. After the birth of the child, I gave it to the mother, at the same time remarking to her that as she valued the life of the child, under no circumstances to allow herself to have another convulsion. She promised faithful obedience, and up to the present has not shown the first indication of her old trouble. It should be mentioned that during the entire period the patient was under observation she had taken large doses of the bromides and other nervines without any effect, save, perhaps, in ameliorating the number and violence of the paroxysms. The case is interesting on account of the rarity of the disease as a complication of pregnancy its persistence throughout the entire period, its resistance to all remedial measures, and the final disappearance of all symptoms after the termination of labor.

Two queries naturally present themselves. What was the exciting cause of the attacks? Would the induction of premature labor in this and similar cases be justifiable?

In answer to the first query, I attribute the attacks to an action upon the brain and spinal cord, reflex in its nature, and developed or excited by the fetus in utero.

The happy termination of the case would seemingly offer a negative to the second query but better judgment will, I think, suggest the wisdom of the operation, and the danger of refusing to employ what theoretically at least offers the only chance of re-

At all events, in a similar case, I would most certainly have recourse to the operation, and expect from it the best results

BOOK REVIEWS

APPLIED ANATOMY By FREDERICK TREVES, F.R.C.S., Assistant London Hospital, Examiner at University of Aberdeen, Professor of Pathology Royal College of Surgeons England. Henry C. Lea's Sons, Philadelphia. Manuals for Students of Medicine (From Jansen, McClurg & Co., Chicago.)

Precisely what is meant by the term "Applied" Anatomy, let the writer of this manual himself define

"Applied anatomy has, I imagine, a two fold function. On the one hand it serves to give a precise basis to those procedures in practice that more especially involve anatomical knowledge, on the other hand, it endues the dull items of that knowledge with meaning and interest by the aid of illustrations drawn from common medical and surgical experience. In this latter aspect it bears somewhat the same relation to systematic anatomy that a series of experiments in physics bears to a treatise dealing with the bare data of that science

"The student of human anatomy has often a nebulous notion that what he is learning will some time prove of service to him. Beyond these impressions, he must regard his efforts as concerned merely in the accumulation of a number of hard, unassimilable facts. It should be one object of applied anatomy to invest these facts with the circumstances of daily life, it should make the dry bones live"

The author intends the book mainly for the use of senior students preparing for their final examinations in surgery

It will be found a valuable means of aiding instruction in the reputable (graded) American schools of medicine equally with the English, for which it was prepared

On the assumption—which we find in the outset of this manual—that all details in anatomy have not the same practical value, quite a successful endeavor is made to assist the student in judging of the comparative value of what he has learned, and aid him "when his recollection of anatomical facts grows dim, to encourage the survival of the fittest," as the author aptly puts it

It is needless to say that such a plan of teaching takes for granted a preliminary course of systematic anatomy. The two-year medical student of a non-graded "college" or "university" who passes examinations simultaneously upon anatomy and surgery will not find such a manual an assistance, but an embarrassment, since it introduces two elements—graded study and *thoroughness*, which are openly at war with the system of education under which he is at work

Incidentally, it may be said of this valuable handbook that most practitioners would not find it too elementary for their use. It has been intended for physicians, as well as advanced students and, with its

well-drawn illustrations and concise definitions of the principles of regional pathology and anatomy, will be found a most convenient work of reference

E W A

CHEMISTRY GENERAL, MEDICAL, AND PHARMACEUTICAL, including the Chemistry of the U S Pharmacopœia. By JOHN ATTFIELD, F.R.S. Published by H C Lea's Sons & Co., Philadelphia

This is the tenth edition of this valuable work. It is well known to medical students and teachers, and requires no lengthened notice. Each new edition appears well printed and well bound. The analytical charts are compact descriptions of methods of analysis, and have always proved a valuable feature of the work. The descriptions of the elements and the reactions of their salts are clear and brief

CHEMISTRY INORGANIC AND ORGANIC, by CHARLES LOUDON BLOXAM, Professor of Chemistry in King's College, London. Published by H C Lea's Sons & Co., Philadelphia

This is another old friend that appears in a new edition. It is a reprint from the fifth English edition. The work has been thoroughly revised and much improved. It contains about 700 pages and many illustrations. Covering as it does, both organic and inorganic chemistry it is well fitted for a general text book for medical students

EPITOME OF SKIN DISEASES, with Formulæ for Students and Practitioners by the late TILBURY FOX, M.D., F.R.C.P., and T. COLCOTT FOX, M.B., F.R.C.P. Third American edition. Published by H C Lea's Sons & Co., Philadelphia

The present volume is the third edition of Dr. Tilbury Fox's well-known little Epitome of Skin Diseases. It has been edited since his death by his brother, T. Colcott Fox. The work has been amended and many parts rewritten. The first 43 pages are devoted to the consideration of general topics, as the "Elementary Lesions," "Classifications," "Causes of Skin Diseases," "Diagnosis," and "General Principles of Treatment." The remainder is devoted to brief descriptions of the skin diseases. These descriptions are alphabetically arranged. The book is what it purports to be, an epitome, and is good of its kind

FOREIGN CORRESPONDENCE

PARIS LETTER.

PARIS, NOV 30, 1883

After having been closed for three months, the portals of the Paris Faculty of Medicine were re opened for the winter session on the 3d inst. I subjoin a list of the professors, with the subjects they are to lecture on, in order to familiarize your readers with the names of some of the leading men of the profession in this country

Prof Gavarret, Medical Physics, Prof Peter, Medical Pathology, Prof Suppey, Anatomy, Prof

Wurtz, Medical Chemistry, Prof Duplay, Surgical Pathology, Prof Le Fort, Operative Surgery, Prof Robin, Histology, Prof Cornil, Morbid Anatomy, Prof Laboulbène, History of Medicine and Surgery, Prof Brouardel, Medical Jurisprudence, Prof Germain See, Clinical Medicine at the Hotel Dieu, Prof Hardy, Clinical Medicine at La Charité, Prof Potain, Clinical Medicine at Hospital Necker, Prof Jaccoud, Clinical Medicine at La Pitié, Prof Ball, Clinical Pathology of Mental Diseases at the Sainte-Anne Asylum, Prof Fournier, Syphilitic and Cutaneous Affections at the Saint-Louis Hospital, Prof Charcot, Diseases of the Nervous System, at La Salpêtrière, Prof Gosselin, Clinical Surgery, at La Charité, Prof Richet, Clinical Surgery, at Hotel Dieu, Prof Vermeuil, Clinical Surgery, at La Pitié, Prof Trélat, Clinical Surgery, at Hospital Necker, Prof Panas, Clinical Ophthalmology, Hotel Dieu, Prof Pujot, Clinical Obstetrics at the Lying in Hospital. Supplementary Course — Dr Henninger, Agrégé, Biological Chemistry, Dr Blanchard, Agrégé, Medical Natural History, Dr Landouzy, Agrégé, Medicine, Dr Richelot, Agrégé, Surgery, Dr Budin, Agrégé, Obstetrics, Dr Charles Richet, Agrégé, Physiology, Dr Raymond, Agrégé, Morbid Anatomy.

After a well earned holiday, professors and students alike have set to work in right earnest. The lectures have begun at the School of Medicine and at the various clinics, and a spirit of activity seems to permeate the public life of the profession.

The lectures that are attracting most attention at present are those of Professors Jaccoud and Peter, the former at La Pitié Hospital, and the latter at the School of Medicine in the chair of Medical Pathology. Both, though treating of different subjects, manage to take occasion to wage war against the growing tendency of the encroachments in medicine of experimental physiology and pathology on the one hand, and against the microbophobists and their doctrines on the other as being prejudicial to a proper system of therapeutics.

One of the most interesting hospitals in Paris is certainly "La Maternité," but unfortunately, it is not open to visitors. Even male medical students are excluded from this hospital, which is devoted exclusively to the instruction of young women educating as sages femmes, or midwives. The hospital is intended for the poorer classes, and contains in all 416 beds, of which 322 are for patients and 94 for pupils, besides 80 cradles for infants. Dr Tarnier, the principal surgeon of the institution, has introduced great improvements in it, not only in a sanitary point of view, but in the judicious treatment of lying-in women and their offspring. He has directed his attention particularly to the condition of prematurely-born infants, with the view of giving them as fair a chance of living as those born at the full term, as it is well known that a child born before the completion of nine months intra-uterine life has about 90 per cent less chance of living than children who are born under natural conditions. To obviate the great mortality among the former, Dr Tarnier, having realized the fact that the immediate cause of death in

these cases was the want of vitality or sufficient power to resist the sudden change from a high to a comparatively low temperature at birth, made this subject a special study. Obstetricians have for a long time been occupied with this question as to the conditions best suited to a new-born babe to enable it to resist as much as possible the variations of temperature to which it is exposed. Guided by the results obtained by the raising of chicks by the employment of artificial heat by means of an apparatus to which the name of "couveuse," or hatching box, has been given, Dr Tarnier has applied this method to congenitally feeble infants, whatever may be the cause of this condition, and with the most favorable results, as may be seen by a work just published by M. Auvard, interne of the hospital. The apparatus is a very ingenious one, and all new-born infants in the hospital weighing less than two kilogrammes are placed in it, and kept there until such time as they may be considered in a fit state to be removed. To give an idea of the advantages of this method, M. Auvard reports that before the employment of "couveuses," from the 1st of August, 1879, to the 31st of July, 1881, 116 infants were born at the Maternité presenting the conditions indicated. Of these 116, 76 died. Since the employment of the couveuses, of 79 new-born infants there were only 30 deaths, that is to say, the lives of 30 per cent were saved. These figures refer to infants born at full term, but weighing less than two kilogrammes. An example of the utility of this method has just occurred at the Maternité, at which a young woman gave birth to triplets, two boys and a girl, all three alive and healthy looking, but they were, nevertheless, put into couveuses by way of precaution, as Dr. Tarnier considered that they cannot be as strong as infants of single birth.

A 11

STATE MEDICINE

STATE BOARD OF HEALTH SANITARY REPORT

By DR C W CHAMBERLAIN SECRETARY

MORTALITY IN AUGUST

	Harford	New Haven	Menden	Waterbury	New Britain	Bridgport	Norwich	New London	Middletown
Total Deaths	104	140	30	43	34	46	57	30	46
Monthly death rate	23	22	17	21	24	15	25	25	38
Zymotics	48	48	18	21	15	14	12	14	14
Infantile	41	28	12	5	16	22	17	15	16
Nervous diseases	6	10	3	1		2			
Heart diseases	8	6	1	1		2		1	
Scarlet fever	2	2	1		2		1		
Typhoid fever	3	6		13	2	1	1		
Typho malarial fever		1			1				
Malarial fever			1						
Diphtheria and croup	28				2				5
Measles		3				1	1		
Whooping cough							1		
Infantile diarrhoea	11	28	10	6	8	10	6		5
Diarrhoea and dysentery	2	2		2			2		2
Consumption	14	13	1	3	6	7	10	4	6
Pneumonia and acute lung	2	7		2			2		2
Old age	4								
Railroad accidents	1								
Accident and violence	1	6		1			1		
In public institutions	8	15							6
Suicide	1								

The report for August is far from satisfactory in many respects. The mortality is not much different from that of the same month last year, but is considerably above the average for the last five years. The large percentages from zymotic diseases and of deaths under five years of age are especially unfavorable characteristics. The deaths from zymotics reach in some cases nearly to fifty per cent of the total mortality, that is half the deaths nearly are from causes that are to a great extent preventable. The difference in the limits of the periods in which infantile diarrhoea prevailed in Hartford and New Haven is very noticeable. In Hartford the greatest prevalence was in June, decreasing in July, and comparatively few cases in August, while in New Haven the greatest prevalence was in July, and in August a decrease corresponding to that in July in Hartford.

The prevalence of typhoid fever is the most important element in the sanitary history of the month, when the relative prevalence of this type of disease and malarial diseases are considered. A few years ago scarcely a case was reported from the malarial region, now the cases begin to exceed the malarial, and in places like Manchester, where the two types exist together, the influence is seen in the prevalence of typho-malarial fever. Two fatal cases of this form are reported from South Manchester, and several cases of typhoid fever. The use of a small stream for the disposal of sewage, which is obstructed by numerous dams, thus causing beds of deposits, which from the natural effects of the dry season must have been more or less uncovered and exposed to the sun, furnishes favorable conditions for the causation of typho-malarial fever. This has been repeatedly illustrated in different places. These same agencies would favor the spread of typhoid fever were the malarial influence wanting. The general decrease in the prevalence of malaria and the malarial influence upon other diseases is very marked, in a large part of the territory, where they have been for quite a long period the governing type. With a few exceptions, which tend to strengthen the idea that there must be some local causes to induce the unusual prevalence, I cannot learn of any general activity in the progress or spread of malaria. While there is a much greater prevalence and a more marked influence over other diseases in the northeasterly frontiers of the region that has already been invaded by malaria, there is no such decided prevalence as exists in the region about Manchester. As has been stated, acute-intermittent is very common, and both typho malaria and malarial fevers

exists. In the present uncertainty as to the ultimate nature of malaria, all such manifestations are of peculiar interest.

The cases reported from Hampton this month and previously were imported by a gang of Italian laborers. A few cases of typho-malarial are reported in August, also typhoid fever, the latter indigenous.

The prevalence of typhoid fever is shown in the table. Its frequency is noticeable in Waterbury, from New Hartford, Thomaston and several places in Litchfield county, from a part of Killingly and from several towns in Windham county. More or less cases of typhoid are reported also from different parts of every county.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM DECEMBER 14, 1883, TO DECEMBER 21, 1883

Campbell, John, Lieutenant Colonel and Surgeon having completed the duties pertaining to the office of the Medical Director of the late Department of the South, to proceed from Newport Barracks, Va., to New York City, and assume the duties of attending surgeon in that city. (Par 12, S O 284, A G O, December 12, 1883.)

Clements, Bennett A, Major and Surgeon relieved from duty as attending surgeon, New York City, and detailed as member of Army Medical Examining Board, now in session in New York City, (Par 12, S O 284, A G O, December 12, 1883.)

McKee, J C, Major and Surgeon assigned to duty as Medical Director, Department of the Columbia. (G O 31, Department of the Columbia, December 3, 1883.)

Williams, John W, Major and Surgeon leave of absence on surgeon's certificate of disability, granted in S O 157 November 12, 1883, Department of the Columbia, extended five months on surgeon's certificate of disability. (Par 6, S O 286, A G O December 14, 1883.)

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING WEEK ENDING DECEMBER 22, 1883

P A Surgeon I C Dale detached from the Coast Survey steamer "McArthur," and ordered to the U S S "Adams," at Sitka, Alaska.

Assistant Surgeon L W Curtis detached from the "Adams" and ordered to the Coast Survey steamer "McArthur."

Surgeon J W Ross detached from the U S S "Esquimaux" and ordered to the U S S "Onward," at Callao.

P A Surgeon C F Hibbett detached from the "Onward" and ordered home.

